# EFFECTIVENESS OF DISTRACTION TACTICS ON PAIN AMONG CHILDREN RECEIVING ANTI RABIES VACCINE INJECTION AT OUTPATIENT DEPARTMENT, GRH MADURAI.

**M.Sc (NURSING) DEGREE EXAMINATION**

**BRANCH - II CHILD HEALTH NURSING**

**COLLEGE OF NURSING, MADURAI MEDICAL COLLEGE,**

**MADURAI -20.**


***A dissertation submitted to***

**THE TAMILNADU DR.M.G.R. MEDICAL UNIVERSITY,**

**CHENNAI - 600 032.**

***In partial fulfillment of the requirement for the degree of***

**MASTER OF SCIENCE IN NURSING**

**OCTOBER 2017**

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***-Alfred North Whitehead***

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# ABSTRACT

**Title:** Effectiveness of distraction tactics on pain among children receiving anti rabies vaccine injection at Outpatient Department, GRH Madurai.. **Objectives:** Evaluate the effectiveness of displaying distraction tactics on pain among children receiving anti rabies vaccine injection at outpatient department GRH Madurai, associate the level of pain among children receiving anti rabies vaccine injection at outpatient department GRH Madurai with their selected socio demographic variables. **Hypotheses:** There is a significant difference in the post test level of pain between experimental group and control group among children receiving anti rabies vaccine injection at outpatient department GRH Madurai. There is a significant association between the level of pain among children receiving anti rabies vaccine injection at outpatient department with their selected demographic and clinical variables. **Conceptual Framework:** Based on Modified Roy's Adaptation model. **Methodology:** A True experimental post test only design used. 60 subjects selected by consecutive sampling technique 30 experimental and 30 control group at Outpatient department at GRH, Madurai. Distraction tactics given 5-10 minutes before administration of anti rabies vaccine injection. Post test was assessed using Wong baker rating scale tool during anti rabies vaccine injection. **Findings:** the study revealed that post test level of pain among children receiving anti rabies vaccine injection in control and experimental group mean difference was 3.26. The unpaired't' test value showed statistically significant difference t=9.304, p=<0.001. **Conclusion:** The study concluded that distraction tactics is a non pharmacological technique is cost effective and to reduce the level of pain among children receiving anti rabies vaccine injection.

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# *INTRODUCTION*

# CHAPTER I

# INTRODUCTION

**"Education begins the moment we see children as innately wise and capable beings, only then can we play alone in their world"**

**Jackie hils-williams**

Children are the future of our society. Their overall health has improved, and rates of death and illness in some areas have decreased, but we still must focus on children's health in the globally. Habits and practices established in childhood have pro-found effects on health and illness throughout life. As a society, creating a population that cares about children and promotes preventative and quality health care and positive lifestyle choices is crucial. Pediatric nurses play a major role in this task. They are often "in the trenches" advocating on various issues, drawing attention to the importance of health care for children, encouraging a focus on education and prevention, and assisting families who lack resources or access to health care. This chapter provides an overview of child health, an introduction to pediatric nursing, and a discussion of ethical and legal issues related to caring for children.

Children are a gift to this world, and, as such, it is society's responsibility to nurture and care for them. In the past, health was denned simply as the absence of disease; health was measured by monitoring the mortality and morbidity of a group. Over the past century, how-ever, the focus of health has shifted to disease prevention, health promotion, and wellness. The World Health Organization (2011)

dense health as “a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity.”

The health of children is of vital importance of all societies because children are basic sources of the future mankind. When children learn to walk, they are called toddlers. It is the time between infancy and childhood, this stage is very important in a child's life, because toddler learns and grows in many ways like physically, socially, emotionally and intellectually. It is also important for children to get regular checkups with their health care provider.

Children are constantly on the move, exploring their world with exuberance, curiosity, and a seemingly endless source of energy. A child’s capacity for learning in this stage is enormous. Preschool-age children learn and develop from every experience, relationship, and adventure they encounter. Having the space and opportunity to explore objects and play environments helps preschool children develop their imagination and master the motor, cognitive, language, and social skills that are essential for future development. Being brought to the hospital causes fear and anxiety in 4 to 6-year-old children.

Pain is a highly individualized, subjective experience that can affect any person of any age. It is a complex phenomenon that involves multiple components and is influenced by myriad factors. Pain is defined by the International Association for the Study of Pain as “an unpleasant sensory and emotional experience that is associated with actual or potential tissue damage” **(International Association for the Study of Pain, 2007).**

Another definition of pain that is commonly used defines pain as whatever the person says it is, existing whenever the person says it does—that is, pain is present

when the person says that it **is (Ferrell, 2005; McCaffery, 1968; McCaffery & Pasero, 2011).**

The person experiencing the pain is the only one who can identify pain and know what the pain is like. Pain is a universal experience. Pain affects adults and children of all ages, even preterm infants. Pain can result from numerous causes, including disease processes, injuries, procedures, and surgical interventions. In 1995 the American Pain Society (1995) labeled it "the fifth vital sign." The American Pain Society's goal was to encourage health care professionals to assess pain every time that temperature, pulse, respirations, and blood pressure are assessed and to institute measures to man-age the pain.

Unlike adults, however, children may lack the verbal capacity to describe their pain accurately. In addition, many caregivers and health care providers have misconceptions about pain in children, it is difficult to assess the complex nature of the pain experience, and limited resources and research are available related to pain relief strategies for children. Therefore, pain is a major source of distress for children and their families as well as for health care providers.

If left unmanaged, pain in children can lead to serious physical and emotional consequences, such as increased oxygen consumption and alterations in blood glucose metabolism. In addition, the experience of untreated pain early in life may lead to long-term physiologic and psychological consequences for the child **(Bowden & Greenberg, 2008).**

Inadequately controlled pain can have long-lasting negative outcomes such as increased distress during later procedures, no adherence to treatment regimens, inactivity, prolonged bed rest, and the development of chronic pain. Detrimental

effects on the course of the disease itself may also be seen with untreated pain. Preterm infants, due to long hospitalizations and numerous painful and invasive procedures, are often at greater risk for experiencing memories of pain **(American Academy of Pediatrics, 2010).**

All these factors make pain management a critical element in the plan of care for children. Treating pain reduces anxiety during procedures and decreases the need for physical restraints, reduces anxiety regard-ing subsequent procedures, and prevents short- and long-term consequences of inadequately treated pain, particularly in newborns **(Cohen & Baxter, 2008; Ken-nedy, Luhmann, & Zempsky, 2008).**

Various national health associations have issued position papers and guidelines related to the need to treat pain and suffering in children. Effective pain management involves initial pain assessment, therapeutic interventions, and reassessment for all children in any health care setting. Hence understanding the pain experience in children, including the types of pain, factors influencing pain, and common fallacies and myths associated with pain in children. Are necessary the nursing process is applied to provide an overview of the care for a child in pain. Various pain management strategies are there, including non pharmacologic and pharmacologic interventions.

## Physiology of pain

The sensation of pain is a complex phenomenon that involves a sequence of physiologic events in the nervous system. These events are transduction, transmission, perception, and modulation.

## Transduction

Peripheral nerve fibers extend from the spinal cord to various locations in and throughout the body's tissues, such as skin, joints, bones, and membranes covering the internal organs. At the end of these fibers are specialized receptors, called nociceptors, which become activated when they are exposed to noxious stimuli. The noxious stimuli can be mechanical, chemical, or thermal. Mechanical stimuli may include intense pressure to an area, a strong muscular contraction, or extensive pressure due to muscular overstretching. Chemical stimulation may involve the release of mediators, such as histamine, prostaglandins, leukotrienes, or bradykinin, as a response to tissue trauma, ischemia, or inflammation. Thermal stimuli typically involve extremes of heat and cold. This process of nociceptor activation is called transduction.

## Transmission

When nociceptors are activated by noxious stimuli, the stimuli are converted to electrical impulses that are relayed along the peripheral nerves to the spinal cord and brain. Specialized afferent nerve fibers are responsible for moving the electrical impulse along. Myelinated A-delta fibers are large fibers that conduct the impulse at very rapid rates. The pain transmitted by these fibers is often referred to as fast pain, most commonly associated with mechanical or thermal stimuli (Porth & Matn, 2009). Pain also is transmitted by un myelinated small C fibers. These fibers transmit the impulse slowly and are often activated by chemical stimuli or continued mechanical or thermal stimuli (Porth & Matn, 2009). These fibers carry the impulse to the spinal cord via the dorsal horn. Neurotransmitters are released to facilitate the transmission process to the brain. Several theories have been proposed in an attempt

to explain the process of pain transmission. The best known of these is the gate-control theory. According to this theory, the dorsal horn of the spinal cord contains inter neuronal or interconnecting fibers. Large-diameter faster fibers carry non nociceptive, tactile information, while small nerve fibers carry nociceptive or pain signals. Large fibers, when stimulated, close the gate or pathway to the brain, thereby inhibiting or blocking the trans-mission of the pain impulse. Subsequently, the impulse does not reach the brain, where it would be interpreted as pain. This theory helps explain why some non pharmacologic therapies, such as massage and pressure, are effective in reducing pain (Porth & Matn, 2009).

**Perception**

Once in the dorsal horn of the spinal cord, the nerve fibers divide and then cross to the opposite side and rise upward to the thalamus. The thalamus responds quickly and sends a message to the somatosensory cortex of the brain, w here the impulse is interpreted as the physical sensation of pain. The impulses carried by the fast A-delta fibers lead to the perception of sharp, stabbing localized pain that also commonly involves a reflex response to withdraw from the stimulus. The impulses carried by the slow C fibers lead to the perception of diffuse, dull, burning or aching pain. The point at which the person first feels the lowest intensity of the painful stimulus is termed the pain threshold. In addition to sending a message to the cerebral cortex, the thalamus also sends a message to the limbic system, where the sensation is interpreted emotionally, and to the brain stem centers, where autonomic nervous system responses begin.

## Modulation

Research has identified substances called neuromodulators that appear to modify the pain sensation. These substances have been found to change a person's perception of pain. Examples of these neuromodulators include serotonin, endorphins, enkephalins, and dynorphins.

Pain perception can be modified peripherally or centrally. In the peripheral nerve fibers, chemical substances are released that either stimulate the nerve fibers or sensitize them. Peripheral sensitization allows the nerve fibers to react to a stimulus that is of lower intensity than would be needed to cause pain. As a result, the person perceives more pain. Actions that block or inhibit the release of these substances can lead to a decrease in pain perception.

Modification of pain perception can occur centrally in the spinal cord at the dorsal horn. Substances released by the excited interneuron's can potentiate the pain sensation. Other neurochemicals, through their binding to specific receptors, can inhibit the perception of pain.

## Types of pain

Many different systems can be used to classify pain. Most commonly, pain is classified based on its duration, etiology, or source or location.

## Management of pain

Management of pain begins with assessment of the child's comfort level. If pain or the potential for pain, such as during an invasive procedure, is identified, steps must be taken to minimize or treat the pain. Three general principles guide pain management in children:

- . Individualize interventions based on the amount of pain experienced and the child's characteristics, such as developmental level, temperament, previous pain experience, and coping strategies.
- Use no pharmacologic and pharmacologic approaches to ease or eliminate the pain.
- Teach the child and family about pain relief interventions and techniques and discuss with the child and family expectations of pain management.
- Specific strategies for pain management include non-pharmacologic interventions such as relaxation, distraction, and guided imagery and pharmacologic interventions such as analgesics, patient-controlled analgesia, local analgesia, epidural analgesia, and moderate sedation.

**Non pharmacologic Management**

Various techniques may be available to assist in managing mild pain in children or to augment the effectiveness of medications for moderate or severe pain. Many of these non pharmacologic techniques assist children in coping with pain and give them an opportunity to feel a sense of mastery or control over the situation. Two types of techniques are behavioral- cognitive strategies and biophysical strategies. It is important to involve the parents in the process when using these techniques.

**Behavioral-Cognitive Strategies**

Behavioral-cognitive strategies for pain management involve measures that require the child to focus on a specific area rather than the pain. These strategies help to change the interpretation of the painful stimuli, reducing pain perception or making pain more tolerable. In addition, these strategies help to decrease negative

attitudes, thoughts, and anxieties, thereby improving the child's coping mechanisms. Typically, these interventions work well with older children, but younger children also benefit from these techniques if they are adapted to the child's age and developmental level. Common behavioral-cognitive strategies include relaxation, distraction, imagery, biofeedback, thought stopping, and positive self-talk.

## Relaxation

Relaxation aids in reducing muscle tension and anxiety. A wide variety of techniques can be used. Relaxation can be as simple as holding an infant or young child closely while stroking the child or speaking in a soft soothing manner, or having the child inhale and exhale slowly using rhythmically controlled deep breathing. It also can involve more sophisticated techniques such as progressive relaxation. With this technique the child is asked to focus on one area of the body and let that body part go limp. Then in an organized fashion, usually working from the toes to the head or vice versa, the child is asked to focus on another body part, making it go limp. Eventually the exercises work through all body areas, leading to relaxation of the entire body.

## Distraction

Distraction involves having the child focus on another stimulus, thereby attempting to shield him or her from pain. Research has shown distraction to be a statistically and clinically significant intervention in reducing pain. In addition, it is time and cost efficient to use **(MacLaren &Cohen, 2007).**

This technique does not eliminate the pain but does help to make it more tolerable. Various methods can be used for distraction, including: Counting,

Repeating specific phrases or words, such as “ouch”, Listening to music or singing, Playing games, including computer and video games, Blowing bubbles or blowing pinwheels or party favors, Listening to favorite stories , Watching cartoons, television shows, or movies, Visiting with friends, Humor

## Watching cartoons

In distraction, the focus is on trying to do something or show the child something that simply gets their mind away from whatever caused the upset (e.g., crying, anger, etc.). So people shake rattles at a crying babies in hopes that it will get their attention or show a child something exciting or feed them a “treat” to get them to stop being sad. Parents, if they notice their child about to engage aggressively with another child, might present a new toy to distract them from their anger. Notably parents do not acknowledge the situation the child is in, but rather try to get the child away from it without ever talking about it.

## 1.1 Need for the study

Rabies is a preventable viral infection of the central nervous system. It is transmitted to other animals and humans through close contact with the saliva of a rabid animal, usually by a bite. The number of cases of rabies has steadily declined in the United States **(Immunization Action Coali-tion, 2010).**

It is rare in the United States and Western Europe due to routine vaccination of domestic animals, such as dogs, and the availability of effective post exposure prophylaxis. Now most cases of rabies in these areas are due to wild animals such as raccoons, skunks, bats, and foxes **(Immunization Action Coalition, 2010).**

Rabies continues to be a major health problem in other parts of the world, especially in areas where dogs are not controlled. Most cases of rabies occur in children younger than 15 years of age, and most human deaths occur in Asia and Africa **(World Health Organization, 2010).**

Children have an increased susceptibility to rabies due to their fearlessness around animals, eagerness to play with animals, shorter stature, and inability to protect themselves. the first dose of rabies vaccine should be given as soon as possible after exposure, ideally within 24 hours. Additional doses of rabies vaccine should be given on days 3, 7, and 14 after the first vaccination. Rabies immune globulin is infiltrated into and around the wound, with any remaining volume administered intramuscularly at a site distant from the vaccine inoculation. **(Rupprecht et al., 2010; Toltzis, 2007).**

An estimated 45% of all deaths from rabies occur in that part of the world. The situation is especially pronounced in India, which reports about 18 000 to 20 000 cases of rabies a year and about 36% of the world's deaths from the disease. Rabies incidence in India has been constant for a decade, without any obvious declining trend, and reported incidence is probably an underestimation of true incidence because in India rabies is still not a notifiable disease. This situation is rooted in a general lack of awareness of preventive measures, which translates into insufficient dog vaccination, an uncontrolled canine population, poor knowledge of proper post-exposure prophylaxis on the part of many medical professionals, and an irregular supply of anti-rabies vaccine and immunoglobulin, particularly in primary-health-care facilities.

In India, rabies affects mainly people of lower socio-economic status and children between the ages of 5 and 15 years. Indian children often play near stray

dogs, which are many and roam freely, and are used to sharing their food with them, which results in frequent bites. In one study, most children attacked by dogs were unaware of having been bitten and their parents often ignored the attacks or simply treated the wounds by applying indigenous products such as hot peppers or turmeric. Only a few parents sought medical advice, usually with delay.

In India lot of rabies cases are reported. In Madurai Medical College, Govt. Rajaji Hospital 5 deaths due to rabies have been reported from September 2010 to August 2011. Out of 5 cases, the diagnosis of rabies in 3 cases was confirmed by immune fluorescent technique. These three reported cases of rabies have been discussed. Out of the three patients, one patient received 4 doses of Anti rabies vaccine (ARV). But, human anti rabies immunoglobulin was not given (HRIG). 2nd patient received only one dose of anti rabies vaccine and the 3rd patient did not receive any medication.

Multisite intradermally (ID) vaccination schedule Updated Thai Red Cross (TRC) regimen/two site ID schedule (2-2-2-0-2). One dose each (0.1 ml) is given at two sites, on both arms (over deltoids) on day 0, day 3, day 7 and day 28. The standard schedule is recommended in designated health-care facilities by trained health professionals under the supervision of a medical officer. Children for hospitalization, surgery, and other procedures that could be painful

(**Child Life Council, 2010a)**

The health care facility or hospital is an unfamiliar environment for children and parents and may upset or intimidate them. They may feel anxiety, fear, helplessness, anger, or loss of control. Even health care procedures performed in the home or school may be perceived as threatening to children. To prevent and minimize the physical stress experienced by children and their families in relation to health care,

pediatric nurses, child life specialists, and other health care professionals recommend the use of a traumatic care.

A traumatic care is defined as therapeutic care that minimizes or eliminates the psychological and physical distress experienced by children and their families in the health care system This concept is based on the underlying premise of “do no harm.” **(Hockenberry & Wilson, 2009; Wong, n.d.).**

Preparation may include preparing the child psycho-logically (including explanation and education) as well as physically. It is very important to employ the concepts of a traumatic care when preparing children for a procedure.

**Distraction methods**• Have the child point toes inward and wiggle them.• Ask the child to squeeze your hand.• Encourage the child to count aloud.• Sing a song and have the child sing along.• Point out the pictures on the ceiling.• Have the child blow bubbles.• Play music appealing to the child. And so as Distraction works because it interrupts children mood and forces children to "shift gears". Many negative moods contain an element of rumination to them. When children ruminate, children go over problem or worry again and again in children mind. Each time children go over children problem or worry, children reinforce its grip. Distraction breaks this grip by forcing children to think about other things, children Maybe better.

The less children struggle against negative emotions, the fewer children have to feel badly about. It is also true that sometimes negative emotions can be overwhelming, and children really need a break from them. Children need to find a personally appropriate balance between dealing directly with such moods and escaping from them in order to have the best chance of healing.

Considering about fat and review various literatures the researcher motivated to do the study effectiveness of distraction tactics among children receiving anti rabies vaccine.

## 1.2 Statement of the problem

A study to evaluate the effectiveness of distraction tactics on pain among children receiving anti rabies vaccine injection at outpatient department, GRH Madurai.

## 1.3 Objectives of the study

- To evaluate the effectiveness of displaying distraction tactics on pain among children receiving anti rabies vaccine injection at outpatient department GRH Madurai.
- To associate the level of pain among children receiving anti rabies vaccine injection at outpatient department GRH Madurai with their selected socio demographic variables and clinical variables.

## 1.4 Hypothesis

- $H_1$: There is a significant difference in the post test level of pain between experimental group and control group among children receiving anti rabies vaccine injection at outpatient department GRH Madurai
- $H_{2:}$ There is a significant association between the level of pain among children receiving anti rabies vaccine injection at outpatient department GRH Madurai with their selected demographic and clinical variables

## 1.5. Operational definition

**Effectiveness**

In this study, it refers to the intended outcome of pain among children receiving anti rabies vaccine injection. It is measured by the use of Wong Bakers face pain rating scale

**Distraction tactics**

In this study, it refers to displaying of cartoon animated videos covering stories of kids with pet animals, rhymes downloaded from online and displayed through laptop for 5-10 minutes during administration of anti rabies vaccine.

**Pain**

In this study, pain refers to the facial expression such as eye squeeze, flared nostril, cheek raiser, crying during anti rabies vaccine injection which is measured by the use of Wong Bakers face pain rating scale

**Anti-rabies vaccine**

In this study, it refers to administration of 10units of anti-rabies vaccine through intradermally at both side deltoid region in 5 units dividing dose, those who attending the outpatient department for the treatment of dog, rat, cat and other animals bite.

**Outpatient department**

In this study, it refers to pediatric surgical outpatient department in which the children receiving anti rabies vaccine injection.

**Children**

In this study, It refers to the male and female children between the ages of 3 to6 years Children receiving anti rabies vaccine injection at outpatient department, GRH Madurai.

## 1.6. Assumptions

The study assumes that:

Children may have different level of pain while receiving anti rabies vaccine injection

## 1.7. Delimitations

The study is limited to,

- The sample age limited to 3-6 years of children.
- The study period is limited to 4-6 weeks.

## 1.8. Projected outcome

Distraction tactics will reduce level of pain among children receiving anti rabies vaccine injection at outpatient department, GRH Madurai. it will give evidence that children undergone anti rabies vaccine who receiving distraction tactics will experience reduction in pain level. The result will motivate the health workers to use this distraction method, cost effective complementary therapy to reduce the level of pain during anti rabies vaccine injection.

# *REVIEW OF LITERATURE*

# CHAPTER II

# REVIEW OF LITERATURE

Review of literature is a key set up in research process, it refers to an extensive, exhaustive, and systematic examination of publication relevant to the research project. Nursing research may be consider a continuing process in which knowledge gained from earlier studies in integral part of research in general one of the most satisfying aspects of the review of literature is the contribution makes to the knowledge before delivering into a new knowledge in nursing practice.

This chapter deals with two parts:

Section – A : Review of literature.

Section – B : Conceptual framework

This chapter attempts to present a review of studies done methodology adopted conclusion attained by earlier investigators which helps in the study. The sources are internet search, textbook, published journal, editorials published and unpublished thesis .

**Section – A**

In this chapter, the researcher presents the review of the literature under the following headings

**2.1 Literature related to pain and pain assessment**

**2.2 Literature related to distraction tactics on pain among children receiving anti rabies vaccine injection.**

**2.3. Literature related to anti rabies vaccine injection.**

## 2.1 Literature related to pain and pain assessment

**Laura D. Wandner, M.S., Cindy D. Scipio, Ph.D.,(2014),** conducted a study on perception of pain in others: how gender, race, and age influence pain expectations, among 111 students in University of Florida. The study finding is white and Hispanic participant more tolerance pain than the black participant and older adult report to more pain, so one's expectations of the pain experience of another person are influenced by the stereotype one has about different genders, race, and ages.

**(Ferrell, 2005; McCaffery, 1968; McCaffery & Pasero, 2011).** Book says that pain is commonly used defines pain as whatever the person says it is, existing whenever the person says it does—that is, pain is present when the person says that

**(American Academy of Pediatrics, 2010).** Book says that inadequately controlled pain can have long-lasting negative outcomes such as increased distress during later procedures, nonadherence to treatment regimens, inactivity, prolonged bed rest, and the development of chronic pain. Detrimental effects on the course of the disease itself may also be seen with untreated pain. Preterm infants, due to long hospitalizations and numerous painful and invasive procedures, are often at greater risk for experiencing memories of pain

**(Bowden & Greenberg, 2008).** Book says that if left unmanaged, pain in children can lead to serious physical and emotional consequences, such as increased oxygen consumption and alterations in blood glucose metabolism. In addition, the experience of untreated pain early in life may lead to long-term physiologic and psychological consequences for the child

**(Cohen & Baxter, 2008; Ken-nedy, Luhmann, & Zempsky, 2008).** Book says that all these factors make pain management a critical element in the plan of care for children. Treating pain reduces anxiety during procedures and decreases the need for physical restraints, reduces anxiety regard-ing subsequent procedures, and prevents short- and long-term consequences of inadequately treated pain, particularly in newborns

**(International Association for the Study of Pain, 2007).** Book says that Pain is a highly individualized, subjective experience that can affect any person of any age. It is a complex phenomenon that involves multiple components and is influenced by myriad factors. Pain is defined by the International Association for the Study of Pain as "an unpleasant sensory and emotional experience that is associated with actual or potential tissue damage"

**Ingalill Gimbler-Berglund(2013),** conducted a qualitative study on identify factors that influence nurses' pain management in children, among 21 nurses working paediatric department were interviewed using semi-structured interviews. finally suggested the Pain management in children could be improved through increased co-operation between nurses, physicians and parents. Nursing implication about education in pain management and children's pain behaviour might also improve nurses' ability to manage pain in children.

**J.G. Beales(2012),** conducted a study to identify factors increasing anxiety, fear and anticipation of pain among patients in a children's Burns Unit and to establish means of modifying such factors in order to reduce the children's experience of pain during nursing and treatment sessions. Among Sixty patients were observed, interviewed at periods throughout their stay in the unit. The study results indicated

that expectation of pain might be reduced by correcting the child's erroneous beliefs about the nature of the healing process and the role of clinical therapy, and by undertaking certain changes in the manner in which treatment and nursing procedures upon the conscious patient.

**Päivi Kankkunen,RN, PhD, (2012),** analysed 14 studies with Leininger's Culture Care Theory as framework for the analysis, Children's age between 0-18 years. Search in Cinahl produced 75 and in PubMed 374 references, suggested in a global view, there are several cultural factors that are related to children's pain in different settings. Many of these factors are specific cultural influences that maintain traditions and practices leading to child ren's suffering from pain.

## 2.2 Literature related to distraction tactics on pain among children receiving anti rabies vaccine injection.

**(MacLaren &Cohen, 2007).** Book says that distraction involves having the child focus on another stimulus, thereby attempting to shield him or her from pain. Research has shown distraction to be a statistically and clinically significant intervention in reducing pain. In addition, it is time and cost efficient to use

**Nejla Canbulat Şahiner, Meltem Demirgoz Bal, (2015),** conducted a randomized, and controlled trial study on distraction techniques on pain and anxiety among children during laboratory investigation . Among 6 to 12 years old children assigned in four groups as the distraction cards the music, balloon inflation. The pain level of the children were assessed by Wong Baker FACES, scale. A study concluded three different distraction methods on pain and anxiety in children was reduced.

**Vikram S.Kumar, sangeeta V. Budur(2014),** conducted a randomized crossover study effectiveness of 'cough trick'(CT) technique is used in reducing intramuscular prick (IMP) pain during vaccinations and subcutaneous injection, intravenous cannulation, among 50 early adolescent male children (age 11-13) receiving immunizations. Participants were recruited from four outpatient pediatric clinics. The strategy required a single "warm-up" cough of moderate force, followed by a second cough that coincided with needle puncture. Results of this study suggest that the Cough tricks can be an effective strategy for the reduction of pain for male adolescent children undergoing routine immunizations.

**Richa Talwar, Anita Yadav, Rupinder Deol, Jasbir Kaur.(2014),** conducted a quasi experimental study to evaluate the efficacy of distraction technique in reducing level of pain among healthy children receiving vaccination at well baby clinic in selected hospital. Among 200 healthy children at using convenience sampling was used. The pain levels of the children were assessed by Wong Baker FACES scale. A sound and light producing movable toy was used as distraction technique the study revealed that effectiveness while children receiving vaccination pain was reduced

**Funda K. Özdemir and Fatma G. Tüfekci(2013),** conducted a quasi-experimental study effectiveness of musical mobile technique on pain among children receiving DpT, IPV,HiP vaccination in primary health center. Among 120 healthy infants in primary health center. It was conducted in a room furnished with or without a musical mobile fixed to the head of the examination table, suspended at a distance of 20 – 25 cm from the infant's face Consolability (FLACC) Pain Scale was used to assess their levels of pain. The result of this study was suggested that, lower pain score and shorter crying duration in response to vaccination with musical mobile.

**Rasha Srouji, Savithiri Ratnapalan, and Suzan Schneeweiss(2013),** conducted a study on non pharmacological management among children during painful procedure this articles various pain assessment scale was used in different age group to assess the pain level in according to their age group. A study concluded age specific nonpharmacological interventions used to manage pain in children are most effective when adapted to the developmental level of the child. Nursing implication Distraction techniques are often provided by nurses, parents or child life specialists and help in pain alleviation during procedures.

**Uman LS, MeMurtry CM (2013)** conducted a randomized control trail on effectiveness of psychological intervention on distress among children during routine childhood vaccination among 1380 infants and children (1month-11years)using psychological intervention. The study findings suggested that combined cognitive-behavioral interventions, breathing exercise, child-directed-distraction. distraction are effective in reducing the pain and distress associated immunizations.

**Windiech-Biermeir A (2013)** conducted a intervention-comparison group design study to evaluate the pain on distraction techniques during venipuncture by using self-selected distracters (i.e., bubbles, virtual reality glasses, or handheld video games, play toys) among 50 children age between 5 to 18 years. The study revealed that participants demonstrated significantly less fear ($P < .001$) and distress ($P = .03$) as rated by the nurse and approached significantly less fear ($P = .07$) as rated by the parent All intervention parents suggested that the needle stick was better because of the distracter.

**Cohen LL, et al., (2012)** conducted a randomized control study on effectiveness of movie distraction in reducing immunization distress during their

routine vaccinations. The pain levels of the children were assessed by behavioural observation rating scale. The study findings suggested that a simple and practical distraction intervention can provide some distress relief to infants during routine injections.

**Cohen LL.(2012)** had done the randomized trial on reducing infant immunization distress through nurse directed distraction. Among 90 infants and their parents were randomly assigned to a distraction condition (i.e., nurses used stimuli to divert infants' attention) or a typical care condition. The research outcome was measured by observational scale, parent and nurse ratings, and infant heart rate. Results indicated that infants engaged in distraction showed reduced behavioural distress.

**Bowen AM,(2012)** conducted a study to compare two brief, inexpensive distraction techniques for children receiving immunizations. Among Preschool children (n=80) were assigned to a party blower intervention. A study findings planned comparisons indicated significant party blower results in the children's ratings of reduced distress ($p<.01$) and the parent's rating of having to hold their child less strongly ($p=.04$), and showed it to be more distracting than the pinwheel ($p<.02$).the overall pattern of results on all rating scales supports the efficacy of using a party blower for reducing children's immunization distress, with minimal staff training and no procedural delay.

**Megal, Houser, & Gleaves (2012)** conducted a study to effectiveness of musical intervention on physiological and behavioural distress and perceived pain among children during routine immunization. Among 99 healthy children age 3-6 years old. Half of them received the musical intervention during the immunization,

while the other half did not. Children in each group were assessed pain and distress help of Oucher scale were used to measure pain intensity. Besides, they were also assessed behavioural distress. Results indicated that no significant differences were found between experimental and control groups for heart rate ,blood pressure, or Oucher scores. It may be possible that the reflective of the ages of children in the studies, 3-6 years, may not be able to focus their attention on distraction devices. However, total distress score of the experimental group were significantly less than the control group.

**Gina M. French, Eileen C. Painter, Daniel L. Coury(2011),** conducted a Randomized, controlled study to effectiveness of distraction technique on pain in preschool children receiving diphtheria, pertussis, and tetanus immunization. in Columbus Public Health Department Immunization Clinics. Among 149 children age between 4to7 years giving them to blow out air repeatedly during the injection, as if they were blowing bubbles. The result of this study was suggest that simple distraction technique can be effective in helping children cope with the pain of immunization. The use of such a technique to relieve the pain and distress associated with even a brief painful procedure should be encouraged.

**Baljit Kaur, Jyoti Sarin, Yogesh Kuma(2011),** conducted a study quasi - experimental study to effectiveness of cartoon distraction on pain and distress undergoing intravenous injection . among 30 children age between 4 to 12 years using purposive sampling method and there was assessment of pain and distress in morning with cartoon distraction and in evening without cartoon distraction at initiation, at five minutes and at termination of administration of intravenous injection, FACES pain scale was used to assess the pain level. A study concluded that cartoon distraction is

an effective distraction strategy to reduce pain and distress among children during intravenous injection.

## 2.3. Literature related to anti rabies vaccine injection.

**(Immunization Action Coali-tion, 2010).** Book says the Rabies is a preventable viral infection of the central nervous system. It is transmitted to other animals and humans through close contact with the saliva of a rabid animal, usually by a bite. The number of cases of rabies has steadily declined in the United States

**(Immunization Action Coalition, 2010).** Book says that it is rare in the United States and Western Europe due to routine vaccination of domestic animals, such as dogs, and the availability of effective post exposure prophylaxis. Now most cases of rabies in these areas are due to wild animals such as raccoons, skunks, bats, and foxes .

**(World Health Organization, 2010).** Says that Rabies continues to be a major health problem in other parts of the world, especially in areas where dogs are not controlled. Most cases of rabies occur in children younger than 15 years of age, and most human deaths occur in Asia and Africa

**(Rupprecht et al., 2010; Toltzis, 2007**). Articles say that Children have an increased susceptibility to rabies due to their fearlessness around animals, eagerness to play with animals, shorter stature, and inability to protect themselves. The first dose of rabies vaccine should be given as soon as possible after exposure, ideally within 24 hours. Additional doses of rabies vaccine should be given on days 3, 7, and 14 after the first vaccination. Rabies immune globulin is infiltrated into and around the wound,

with any remaining volume administered intramuscularly at a site distant from the vaccine inoculation.

**Dr. Rakesh Kumar(2016),** conducted a study on disease transmitted by dog bite and regarding management of dog bite, among 300 samples using cluster sampling technique used . Information was collected using structured questionnaire regarding history of dog bite in past one year and its management practices, knowledge on pet dog care, activities done by government for control of dog population, the study suggested found an unsatisfactory pet care practices & very low awareness regarding rabies, dog population control program and management of dog bite injuries. Management of dog bites injuries was grossly inadequate.

**N Agarwal, CM Singh, Kumar Gulshan,(2015)** conducted a study community based cross sectional survey was done in urban areas of Patna, the capital of Bihar, multistage sampling technique was used, among 5140 individuals (male 53%; female 47%). Dog bite cases were twice in males than that of females (26% and 13% respectively; p=0.0010) which increases with age up to 15 years, in this study suggest males are being more affected than the females and pattern of bite is bimodal, most bites were of cat III and involved dogs were male. Dog bites occur more during the summer season.

**V. Khan, D. B. Zala, K. M. Joshi and V.K. Das(2014),** conducted a study dog bite incidence in Union Territory of Dadra & Nagar Haveli, India, This assessment included victims age, sex, biting site and season of the year. During the study, a total of 938 dog bites, were reported from aforesaid place. Of all the dog bites reported, 39.6% victim belonged to age group up to 0-15 year (children) and 60.4% were more than 15 years old (adults).in this study suggested The incidence of dog bite

was recorded in all age groups but was elevated in age groups of 0-10 year and males were the primary victims. Males are affected more often than the females.

**N. Agarvval and V.P. Reddaiah (2014),** done a community-based epidemiological study, in knowledge, attitude and practice following dog bite: a cross-sectional study of the rural community residing in 3 randomly selected villages attached to a Primary Health Centre- Dayalpur, The dog-bite rate in the area was 25.7/1000 population per year. Two-third of the cases were in the 5-45 age group and there was a rise in the rate of dog bites with increased age. Bites in males were more than females. Half of the bites were reported in summer months. However, 40 percent of such cases did not seek any prophylaxis treatment. The findings of the present study clarity indicate the fact that knowledge on various aspects of the disease is limited among people. The attitude and practice still continue to be primitive and therefore, the treatment options presently available are not property utilized

## Section – B

## 2.4 Conceptual framework

### Introduction

Theorist, Sr. Callista Roy, was born at Los Angeles on October 14, 1939; earned Bachelor of Arts with a major in nursing from Mount St. Mary's College, Los Angeles in 1963; Master's degree program in paediatric nursing at the University of California, Los Angeles in 1966; Master's & PhD in Sociology in 1973 & 1977.

RAM is one of the widely applied nursing models in nursing practice, education and research.

**Philosophical underpinnings of the theory**

A conceptual framework is a theoretical approach to study the problems that are scientifically based, which emphasizes the selection, arrangement and classification of its concepts. A conceptual framework is referred to as the interrelated concepts or abstracts that are assembled together in some rational scheme by virtue of their relevance to a common theme. The overall objective of a framework is to make scientific findings meaningful and generalizable and they also give direction for relevant questions of practical problems.

The conceptual framework for this study is developed by the investigator based on Roy's Adaptation Model. This theory focus on the adaptation of the individual to various stimuli, both from the internal and outside environment. An individual's behaviour is based on the input, control process, output, and feedback mechanism.

Sister Callista Roy views people as individuals who are in constant interaction with the surrounding environment, an integral whole with biological, psychological, and social components. Individuals have certain needs which they Endeavour to meeting order to maintain integrity. The needs are divided into adaptive needs such as physiological, self-concept, role function, and interdependence.

**Terms**

**System:** a set of parts connected to function as a whole for same purpose.

**Stimulus or Input**

Something that provokes a response, point of interaction for the human system and the environment. They are the various stimuli which provoke or stimulate the

individual. The adaptation level of the client/ individual is determined by the different stimuli to which he/she is exposed. The client /individual respond to three different stimuli the 1) focal stimuli the 2) contextual stimuli the 3) residual stimuli. To cope with these stimuli, he/she requires various types of comfortive and supportive measures like positioning, massage, reflexology, relaxation techniques, and deviation techniques.

**1. Focal stimuli**

According to sister Callista, the meaning of focal stimuli is internal or external stimulus immediately affecting the system or those stimuli which immediately confronting the person, to which the person must make an adaptive response.

In this study, it is the anti rabies vaccine injection pain experienced by the Children.

**2. Contextual stimuli**

According to this theory, the meaning of contextual stimuli is other stimulus present in the situation Or the other internal and external stimuli which were identified the person as having a positive or negative influence on the situation. It contributes to the behavior caused or precipitated by the focal stimuli.

In this study, the anti rabies vaccine injection pain will be influenced by contextual stimuli like fear of the unknown surroundings, and poor social support.

**3. Residual stimuli**

According to this theory, the meaning of residual stimuli is environmental factor, those effects on the situation that are unclear. Residual stimuli are those

internal factors which were experienced in the past and can influence in the person both positively or negatively. The factors that may be affecting behavior whose effects are not validated.

In this study, they are the present experience of first site of anti rabies vaccine injection, socio cultural orientation, and contact with healthcare professionals, pain threshold, and lack of knowledge regarding the outcome.

**Control Process**

The control process includes biological and psychological coping mechanisms.

**Coping Process**

Is the innate or acquired ways innate or of interacting with the changing of environment. Regulator and cognator are the two sub-system coping mechanisms.

**Regulator Subsystem**

According to this theory, it is the sub-system coping mechanism which responds automatically through neural-chemical-endocrine processes. That is nothing but the automatic response to stimulus (neural, chemical, and endocrine).

In a anti rabies vaccine injection Children, nerves transmit pain stimuli to the dorsal root ganglia and to the posterior horn of the spinal cord. From there the impulse will be transmitted to the thalamus and to the sensory cortex of the brain.

**Cognator Subsystem**

According to this theory, it responds through four cognitive responds through four cognitive-emotive channels (perceptual and information processing, learning, judgment, and emotion). The individual uses the cognitive subsystem by perceiving the information given by the caregivers.

In this study the investigator explains the impact of animation video distraction on children receiving anti rabies vaccine injection pain and the client will understand, appreciate and cooperate positively and manifest positive behaviour.

**Adaptive modes or Effectors**

**The adaptive modes:** Adaptive or effectors modes are a classification of ways of coping that manifest regulator or cognator activity. According to this theory, there are four modes namely,

- Physiological mode
- Self-concept or group identity mode
- Role function
- Interdependence mode

**Physiologic - Physical Mode:**

**According to this theory, it is the**

- Behavior pertaining to the physical aspect of the human system.
- 5 need namely (Oxygenation, Nutrition, Elimination, Activity &Rest, and Protection).

In this study, the physiological mode**,** involves the body's basic needs and ways of dealing with adaptation with regard to fluid and electrolytes, nutrition, circulation, oxygenation, elimination, exercise and rest, and the regulation of senses, temperature and endocrine function.

**Self-Concept-Group Identity mode**

**According to this theory, it is the**

Composite of beliefs and feelings held about oneself at a given time. It Focus on the psychological and spiritual aspects of the human system. Need to know who one is, so that one can exist with a state of unity, meaning, and purposefulness of 2 modes (physical self, and personal self) .

In this study, Self-concept is related to the basic need for psychic integrity, composite of beliefs, and feelings that one holds about oneself at a given time. In this study, self-concept refers to the maintenance of morale, spiritual self, and confidence which are adaptive responses. The psychological changes produced through the relaxation and enhance the release of endorphins in the body. The mind will relax and reduce stress, anxiety. The wellbeing of the mind may lead to stable mood and hopefulness, worth fulness and increase the self-esteem to life.

**Role Function Mode**

**According to this theory, it is the**

Set of expectations about how a person occupying one position behaves toward a occupying another position. Basic need-social integrity, the need to know who one is in relation to others. In this study, Role function is the performance of duties based on given positions in the society. Accepting one's own role as head of the family, mother, teacher, etc are adaptive responses.

**Interdependence Mode**

According to this theory, it is the Behavior pertaining to interdependent relationships of individuals and groups. Focus on the close relationships of people and their purpose. Each relationship exists for some reason. Involves the willingness and ability to give to others and accept from others. Balance results in feelings of being valued and supported by others. Basic need - feeling of security in relationships.

In this study, Interdependence mode, is the relationship with significant others and the supportive system. In this study, cooperation, maintenance of good interpersonal relationship with the care providers and the investigator are adaptive responses. Social changes are produced through the well being of the mood. So, the

client was able to maintain good interpersonal relationship with society, increase group performance, increase independency and increased social activity. distraction tactics (animation video)will help conserve energy, increase circulation, reduce heart rate and blood pressure relieves pain, promote comfort and relax muscles of the individual during anti rabies vaccine injection period.

**Behavior - Output**

According to this theory, it is the internal or external actions and reactions under specific circumstances. It is the decreased or increased perception to the stimuli and it corresponds to two responses namely, adaptive or maladaptive behavioural responses.

**Adaptive Responses -** promote the integrity of the human system. In this study, it is the decreased intensity of anti rabies vaccine injection pain corresponding adaptive behavioural responses which can be evaluated by using Preschooler-school children anti rabies vaccine injection pain scale in experimental group.

**Ineffective Responses** - neither promotes not contribute to the integrity of the human system. In this study, it indicates neither the pain has reduced nor the pain has increased which can be evaluated by using Preschooler-school children anti rabies vaccine injection pain scale in control group.

**Feedback**

Feedback or the responses for the perceived stimuli. In this study, the positive response is expected from the child.

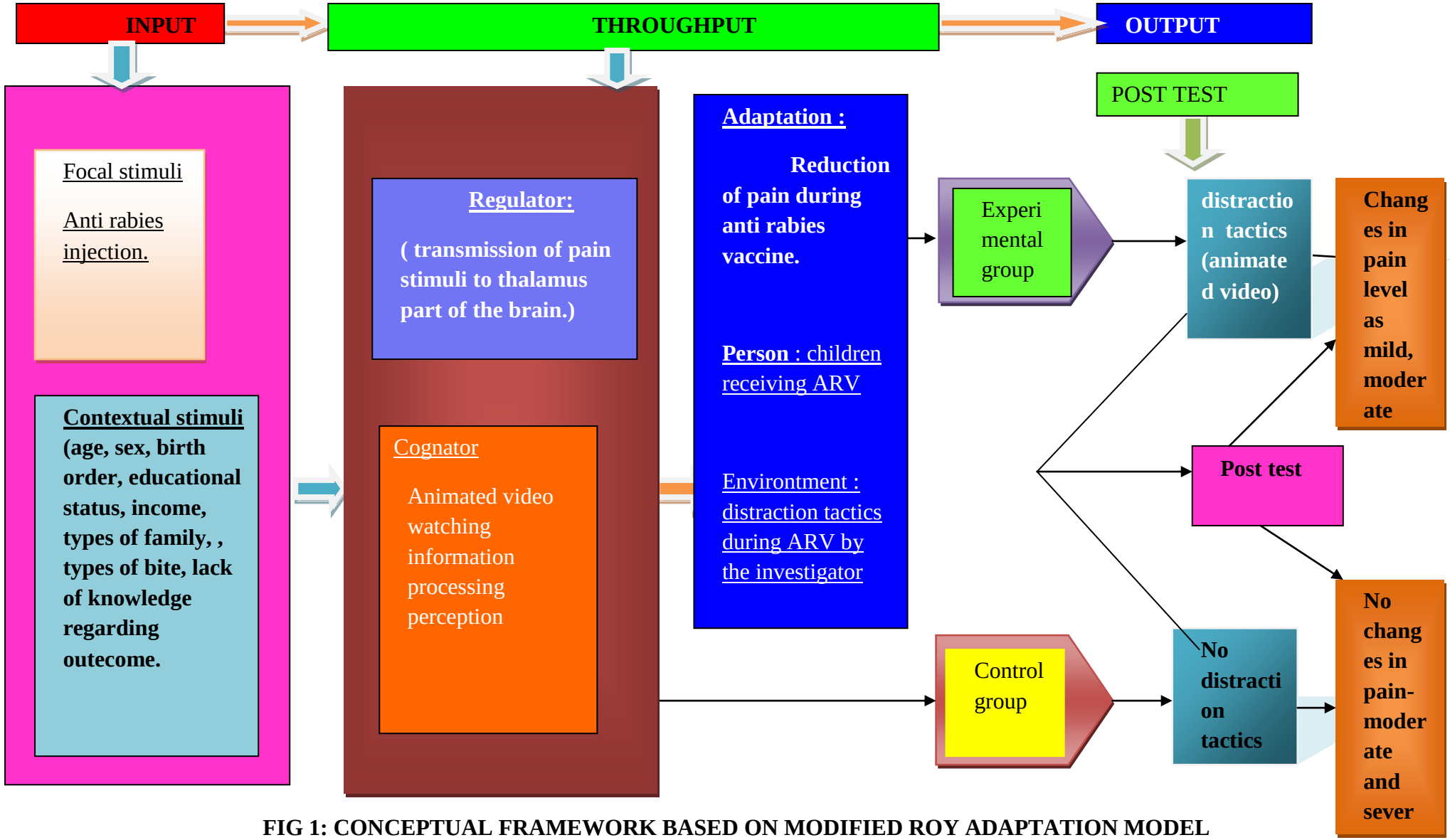



**FIG 1: CONCEPTUAL FRAMEWORK BASED ON MODIFIED ROY ADAPTATION MODEL**

# *METHODOLOGY*

# CHAPTER III

## RESEARCH METHODOLOGY

Research methodology is the systematic way of doing a research to solve a problem. It comprises of the research approach, research design, statistical methods used for analyzing the data and the logic behind it. **(Kothari CR, 2003).** On the whole it gives a general pattern of gathering and processing the research data.

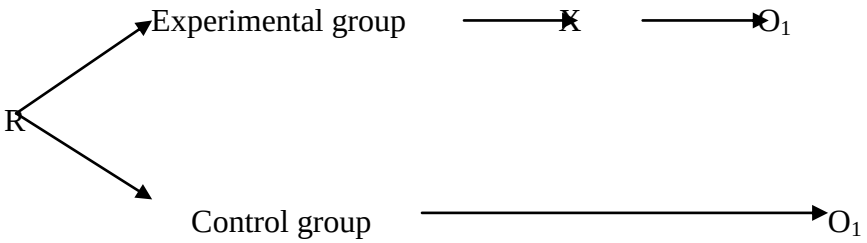
This chapter describes the methodology adopted for evaluating effectiveness of distraction tactics (displaying of cartoon animated picture through laptop) for 5-10 minutes among children receiving anti rabies vaccine injection at outpatient department.GRH, Madurai. The methodology includes the research design, setting of the study, population, sample and sample size, sampling technique, description of the tool, method of data collection and plan for data collection.

### 3.1 Research approach

A **quantitative approach** is adopted by the researcher to evaluate the effectiveness of distraction tactics (displaying of cartoon animated picture through laptop) for 5-10 minutes among children receiving anti rabies vaccine injection at outpatient department. GRH, Madurai.

### 3.2 Research design

True experimental research design with the post test only controls group designing.




R – Randomization.

O1– Post test level of pain on among children receiving anti rabies vaccine injection

X – Distraction tactics (for 5-10 minutes to distract the children from pain among children receiving anti rabies vaccine injection)

## 3.3 Research variables

Variable are characteristics or attribute of person or an object that varies within the population under study. The variables of the study include:

**Independent variable:**

In this study the independent variable is the distraction tactics

**Dependent variable:**

In this study dependent variable pain during Intra dermal injection among children

**Socio demographic Variables**

Socio demographic variables include

Part-I Socio Demographic data includes age, sex, education, diagnosis, religious, occupation, income, residency, Pet animals at home. Part-II: clinical variables previous experience of immunization Nature of the child, types of bite.

## 3.4 Setting of the study

The study conducted in pediatric surgical outpatient department, Institute of child health and research center in GRH**,** Madurai At present there are about 3106 beds available in hospital and it provides a comprehensive care to all.

## 3.5 Population

**Target population:**

The children who are receiving the anti rabies vaccine injection

**Accessible population:**

The children who are receiving the anti rabies vaccine outpatient department at GRH, at Madurai.

## 3.6 Sample

The children who are coming to the anti rabies vaccine .who full fill the inclusion criteria outpatient department at GRH, at Madurai considered as sample

## 3.7 Sample size

Sample size is 100 children 50 in experimental group and 50 in control group for the study, the sample are assigned in systemic random sampling.

## 3.8 Sampling technique

Sampling technique used in the study is probability method- consecutive sampling technique. 100children in pediatric surgical outpatient department were included in the study who fulfill the sampling criteria.

## 3.9 Criteria for sample selection

**Inclusion Criteria:**

1. Children who receiving the 1st dose of anti rabies vaccine
2. Both male and female 3-6 years children visit anti rabies vaccine outpatient department
3. Children available at the time of data collection.

**Exclusion Criteria:**

Study excludes:-

- ❖ Children with visual and auditory impairment.
- ❖ Children receiving immunoglobulin with anti rabies vaccine
- ❖ Children who are not permitted by parents

## 3.10 Selection and Description of the tool

The tool was developed after extensive review of literature, internet search and discussion with the experts. In order to measure the effectiveness of distraction tactics on pain among children receiving anti rabies vaccine injection a structured questionnaire for demographic variables and Wong Baker Faces Scale was used for the study.

**Section A:** Socio demographic Variables

**Section B:** Wong Baker Faces Scale

**Section A: (Socio demographic Variables)**

A structured questionnaire was used to assess the demographic variables of the patient such as

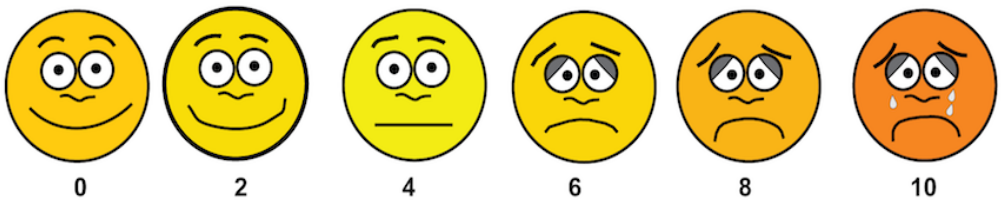
**Part I: Socio demographic variables:**

Part-I Socio Demographic data includes age, sex, education, diagnosis, religious, occupation, , income, residency. Pet animals at home.

**Part II: Clinical variables**

Previous experience of immunization Nature of the child, types of bite.

**Section B**:




Wong Baker Faces Scale was used to assess the pain level of children.

0 No hurt (pleasant and smiling face)

1-2 Hurts Little Bit (little bit confused and smile)

3-4 Hurts Little More (blank face without any reaction)

5-6 Hurts Even More (sad and about to cry)

7-8 Hurts Whole Lot (drooping eyebrows and cry)

9-10 Hurts Worst (scream and uncontrollable cry)

## 3.11 Scoring procedure

| SCORE | LEVEL OF PAIN |
|---|---|
| 0 | No pain |
| 1-2 | Mild pain |
| 3-4 | Moderate pain |
| 5-6 | Severe pain |
| 7-8 | Very Severe pain |
| 9-10 | Worst pain |

## 3.12 Testing of the tool

**Reliability of the tool**

The reliability of an instrument is the degree of consistency with which it measures the attribute and it is supposed to be measuring over a period of time. The inter-rater reliability coefficient for Wong Baker pain face scale were found to be high, with value are r=0.79. Hence the tool was consider highly reliable proceeding with the main study.

**Content validity:**

The tool was validated by experts from the field of Child Health Nursing and experts from medical and surgical department of Paediatrics. The experts were requested to check the relevance, sequence and adequacy of the items in the interview schedule.

## 3.13.Pilot study

Pilot study generally involves a sample of subjects drawn from the same populations as those from which the study sample will be drawn. The pilot study was conducted in the Institute of child health and research centre in GRH, Madurai, for the period of one week. Formal permission was obtained from the Director of Institute of Child Health and research, and from the Head of the Department of Surgery. The pilot study was conducted on (06.03.17 to 12.03.17). Ten samples those who fulfilled the inclusion criteria were chosen by using consecutive sampling technique, random selection on consecutive days. Informed consent was obtained from the mothers of the sample and data was collected.

## 3.14 Ethical consideration

This study was conducted after the approval from the ethical committee, Madurai Medical College, Madurai-20. All respondents were carefully informed

about the purpose of the study and their part during the study and how the privacy was guarded. Ensured confidentiality of the study result. Written permission was obtained from all participants.

## 3.15 Data collection procedure

A prior permission obtained from the pediatric outpatient department, GRH , Madurai authority; sample was selected based on the inclusion criteria. The study was explained in detail to the samples and informed consent was obtained from them. Level of pain among children receiving anti rabies vaccine after distraction tactics was assessed through standardized Wong Baker FACE rating scale . The distraction tactics was given for the children of experimental group only post test level of pain of both experimental and control group was assessed to evaluate the effectiveness of distraction tactics.

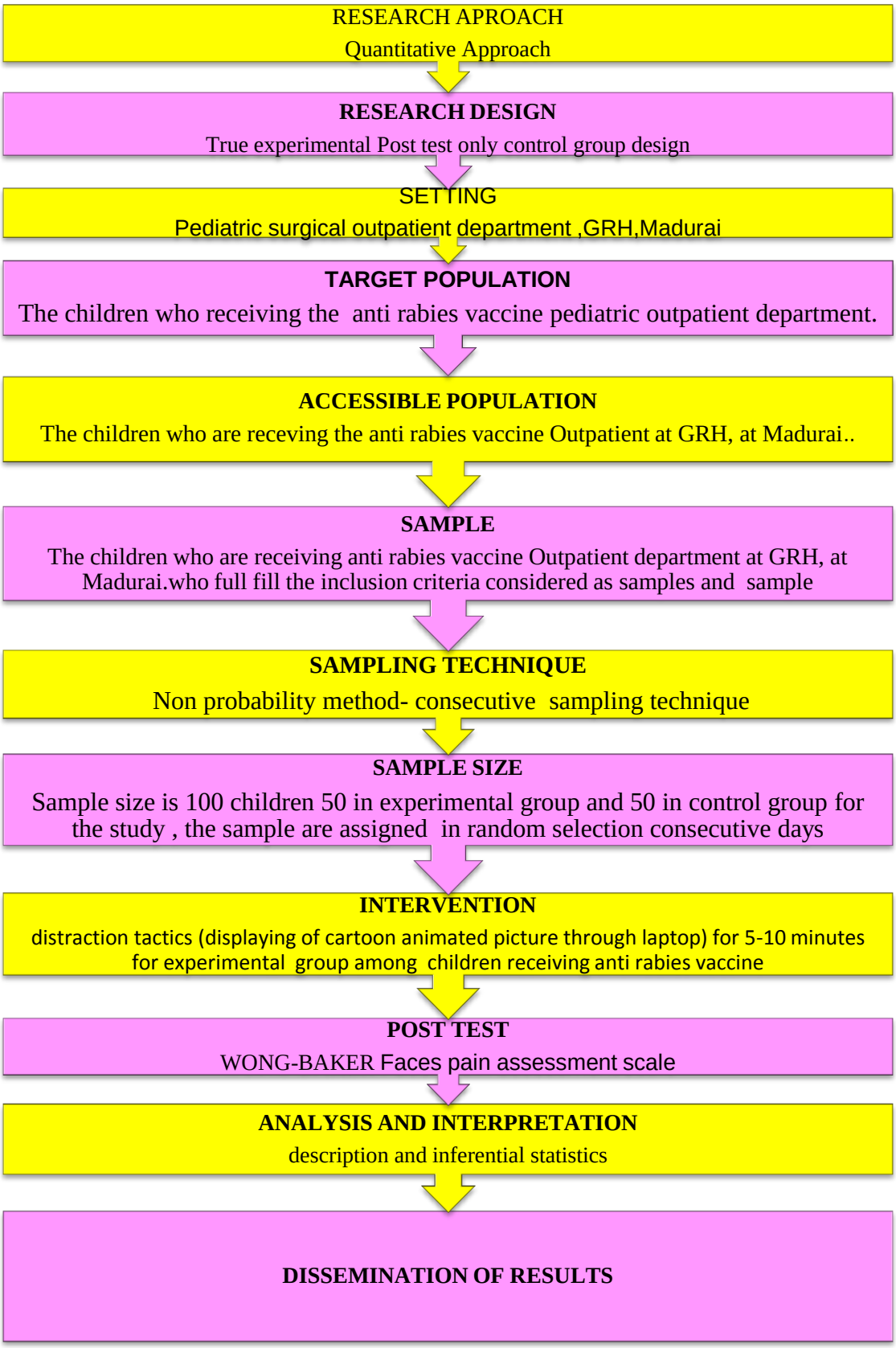
## 3.16 Plan for data analysis

The collected data was analyzed using descriptive and inferential statistics, i.e., mean, mean percentage, and standard deviation. The obtained data was entered after editing, coding, grouping, tabulation and transferring to a computer file. Chi-square test was used to find out the association. Analyzed data was presented in the form of tables and graphs.

## 3.17 Protection of human rights

The investigator obtained approval from the dissertation committee of college of Nursing, Madurai, ethics committee, Director Institute of child Health and Research centre and principal college of Nursing. Both verbal and written consent was obtained from all the participants. The subjects were informed that they can withdraw from the study without any penalty. Confidentiality and anonymity will be maintained throughout the study.

### 3.18 Schematic representation of research methodology



# *DATA ANALYSIS AND INTERPRETATION*

# CHAPTER IV

## DATA ANALYSIS AND INTERPRETATION

Analysis is the process of categorizing, ordering, manipulating and summarizing of data to obtain an answer to the research question. The purpose of analysis is to reduce the data to an intelligible and interpretable form so that relations for the research problem can be studied and tested.

This chapter deals with analysis and interpretation of data collected from 100 children for assessing the effectiveness of distraction tactics on level of pain during children receiving anti rabies vaccine injection. It is based on the data collected from the subject through Wong baker face rating scale (1999). The data collected and analyzed using appropriate statistical methods, tabulated, analyzed and the results are interpreted by using descriptive and inferential statistics.

## 4.1 ORGANIZATION OF DATA

The analysis and interpretation of data was organized under the following sections.

**Section I:**

Distribution of socio demographic variable and clinical variables among children receiving anti rabies vaccine injection

**Section II:**

Description of level of pain among children receiving anti rabies vaccine injection.

**Section III:**

Effectiveness of distraction tactics on level of pain among children receiving anti rabies vaccine injection.

**Section IV:**

Association between the level of pain among children receiving anti rabies vaccine injection their selected socio demographic variables and clinical variables children receiving anti rabies vaccine injection at outpatient department GRH Madurai

# Section – I

## Distribution of socio demographic variable and clinical variables among children receiving anti rabies vaccine injection

## Table: 1

**Frequency and percentage distribution of samples according to Socio demographic variables and clinical variables.** **n= 100**

| S.No | Socio demographic variables | Control group (n=50) | | Experimental group (n=50) | |
|---|---|---|---|---|---|
| | | F | % | F | % |
| 1 | **Age of the child (in years):** | | | | |
| | 3-4 | **8** | 16 | 11 | 22 |
| | 4-5 | **9** | 18 | 14 | 28 |
| | 5-6 | **33** | 66 | 25 | 50 |
| 2 | **Sex of the child** | | | | |
| | Male | 37 | 74 | 28 | 56 |
| | Female | 13 | 26 | 22 | 44 |
| 3 | **Birth order of the child:** | | | | |
| | First | 21 | 42 | 19 | 38 |
| | Second | 17 | 34 | 25 | 50 |
| | Third and above | 12 | 24 | 6 | 12 |
| 4 | **Place of residence :** | | | | |
| | Rural | 29 | 58 | 26 | 52 |
| | Urban | 21 | 42 | 24 | 48 |
| 5 | **Type of Family:** | | | | |
| | Nuclear family | 30 | 60 | 28 | 56 |
| | Joint family | 20 | 40 | 22 | 44 |
| | Extended family | 0 | 0 | 0 | 0 |
| 6 | **Mothers education status:** | | | | |
| | Primary | 12 | 24 | 20 | 40 |
| | Secondary | 24 | 48 | 19 | 38 |
| | Graduate | 12 | 24 | 11 | 22 |
| | No formal education | 2 | 4 | 0 | 0 |
| 7 | **Fathers Educational status:** | | | | |
| | Primary | 12 | 24 | 20 | 40 |
| | Secondary | 27 | 54 | 19 | 38 |
| | Graduate | 10 | 20 | 11 | 22 |
| | No formal education | 1 | 2 | 0 | 0 |

| S.No | Socio demographic variables | Control group (n=50) | | Experimental group (n=50) | |
|---|---|---|---|---|---|
| | | F | % | F | % |
| 8 | **Income of the family :** | | | | |
| | Less than Rs.2000 | **16** | 32 | 17 | 34 |
| | Rs.2001-4000 | **30** | 60 | 30 | 60 |
| | Rs.4001-6000 | **4** | 8 | 3 | 6 |
| | Rs.6001 & above | **0** | 0 | 0 | 0 |
| 9 | **Pet animal at home:** | | | | |
| | Yes | 21 | 42 | 29 | 58 |
| | No | 29 | 58 | 21 | 42 |
| 10 | **Previous experience anti rabies vaccine immunization:** | | | | |
| | Yes | 5 | 10 | 10 | 20 |
| | No | 45 | 90 | 40 | 80 |
| 11 | **Nature of the child :** | | | | |
| | Hyperactive | 45 | 90 | 45 | 90 |
| | Hypo Active | 1 | 2 | 0 | 0 |
| | Normal | 4 | 8 | 5 | 10 |
| 12 | **Type of bite :** | | | | |
| | Dog | 46 | 92 | 48 | 96 |
| | Cat | 3 | 6 | 0 | 0 |
| | Rat | 1 | 2 | 2 | 4 |
| | Others | 0 | 0 | 0 | 0 |

Above table reveals that demographic information of children those who participated in the following study on A study to evaluate the effectiveness of distraction tactics on pain among children receiving anti rabies vaccine injection at outpatient department, GRH Madurai.

Considering the age wise distribution of children in the experimental group (22%) 11 children were in 3-4 years of age, (28%) 14 children were 4-5 years of age and ((50%) 25 children were 5-6 years of age. In the control group (16%) 8 children were in 3-4 years of age, (18%) 9 children were 4-5 years of age, (66%) 33 children were 5-6 years of age.

Regarding sex wise distribution in experimental group (56%) 28 were male children and (44%) 22 were female children. In the control group (74%) 37 were male children and (26%) 13 were female children participated in the study.

Based on the birth order wise distribution in experimental group (38%) 19 children were born as first order, (50%) 25 children were born as second order and (12%) 6 children were born as third and above. In the control group (42%) 21 children were born as first order, (34%) 17 children were born as second order and (24%) 12 children were born as third and above.

Based on the place of residence in the experimental group (52%) 26 children were lives in rural area and (48%) 24 children were lives in urban area. In the control group (58%) 29 children were lives in rural area and (42%) 21 children were lives in urban area.

On the basis of type of family in the experimental group (56%) 28 children were belongs to nuclear family, (42%) 21 children were belongs to joint family and (0%) 0 children were belongs to extended family. In the control group ( 60%) 30 children were belongs to nuclear family, (40%) 20 children were belongs to joint family and (0%) 0 children were belongs to extended family.

Regarding the educational status of the mother in the experimental group (40%) 20 mothers were primary education, (38%) 19 mothers having secondary education and (22%) 11 mothers having graduate, (0%) 0 mothers having no formal education. In the control group (24%) 12 mothers were primary education, (48%) 24 mothers having secondary education and (20%) 10 mothers having graduate, (4%) 2 mother having no formal education.

Regarding the educational status of the fathers in the experimental group (32%) 16 fathers were primary education, (56%) 28 fathers having secondary education and (12%) 6 fathers having graduate, (0%) 0 fathers having no formal education. In the control group (24%) 12 fathers were primary education , (54%) 27 fathers having secondary education and (20%) 10 fathers having graduate, (2%) 1 fathers having no formal education.

When considering the income of the family in the experimental group (34%) 17 of them have less than Rs.2000 per month, (60%) 30 of the have Rs. 2001 – 4000 per month and (6%) 3 of them have Rs.4001-6000 and (0%) 0 of them have Rs 6001 and above. In the control group (32%) 16 of them have less than Rs.2000 per month, (60%) 30 of the have Rs. 2001 – 4000 per month and (8%) 4 of them have Rs.4001-6000 per month and (0%) 0 of them have Rs 6001 and above per month.

While discussing pet animal at home in the experimental group (58%) 29 were having pet animal at home, (42%) 21 were not having pet animal at home. In the control group (42%) 21 were having pet animal at home, (58%) 29 were not having pet animal at home.

Regarding the previous experience of anti rabies vaccine immunization in experimental group (20%) 10 were having previous experience of anti rabies vaccine immunization and (80%) 40 were not having previous experience of anti rabies vaccine immunization. In control group (10%) 5 were having previous experience of anti rabies vaccine immunization and (90%) 45 were not having previous experience of anti rabies vaccine immunization.

When comparing the nature of the child in experimental group (90%) 45 were in hyper active, (0%) 0 were in hypo active and (10%) 5 were normal. In

control group group (90%) 45 were in hyper active, (2%) 1 were in hypo active and (8%) 4 were normal.

On the basis of type of bite in experimental group (96%) 48 were children having dog bite, (0%) 0 were children having cat bite, and (4%) 2 were children having rat bite, (0%) 0 were children having others type of bite. In control group (92%) 46 were children having dog bite, (6%) 3 were children having cat bite, and (2%) 1 were children having rat bite, (0%) 0 were children having others type of bite.

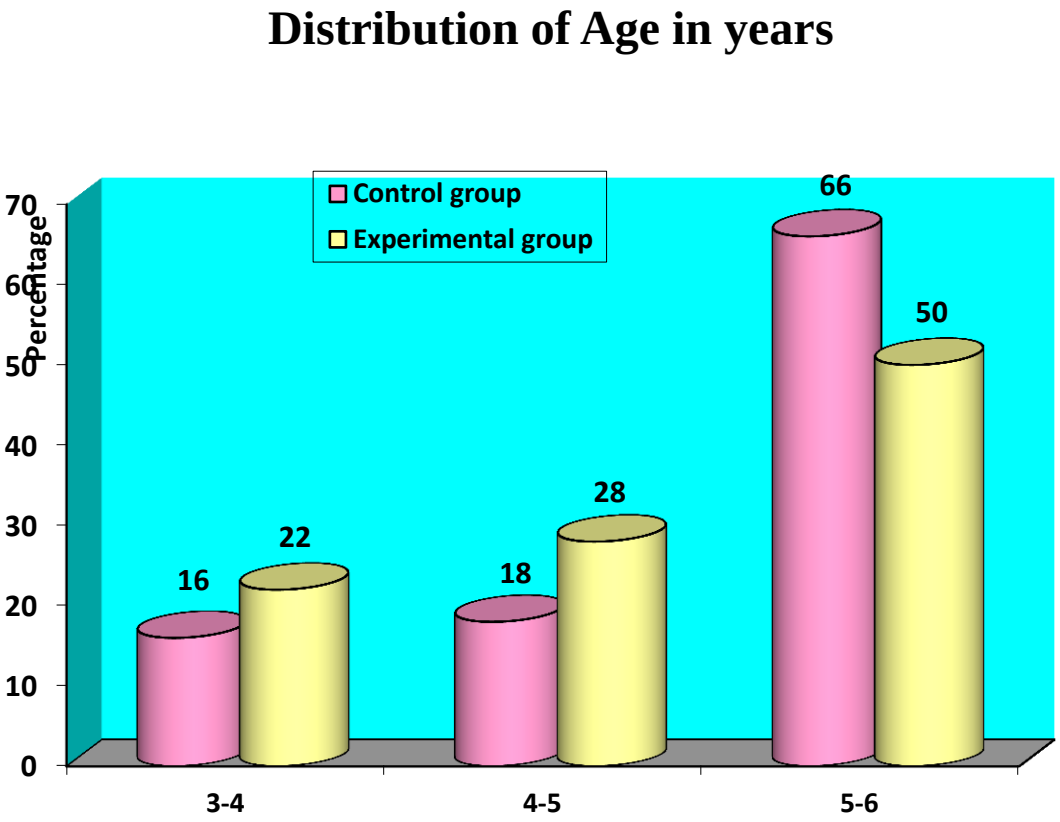



**Fig. 3. Percentage distribution of subjects in experimental group and control group according to their age.**

The above bar diagram shows that majority of subjects were (66%) 33 of them were 5-6 years age group in control group and (50%) 25 of them were 5-6 years of age group in experimental group.

# Distribution of Sex of the child

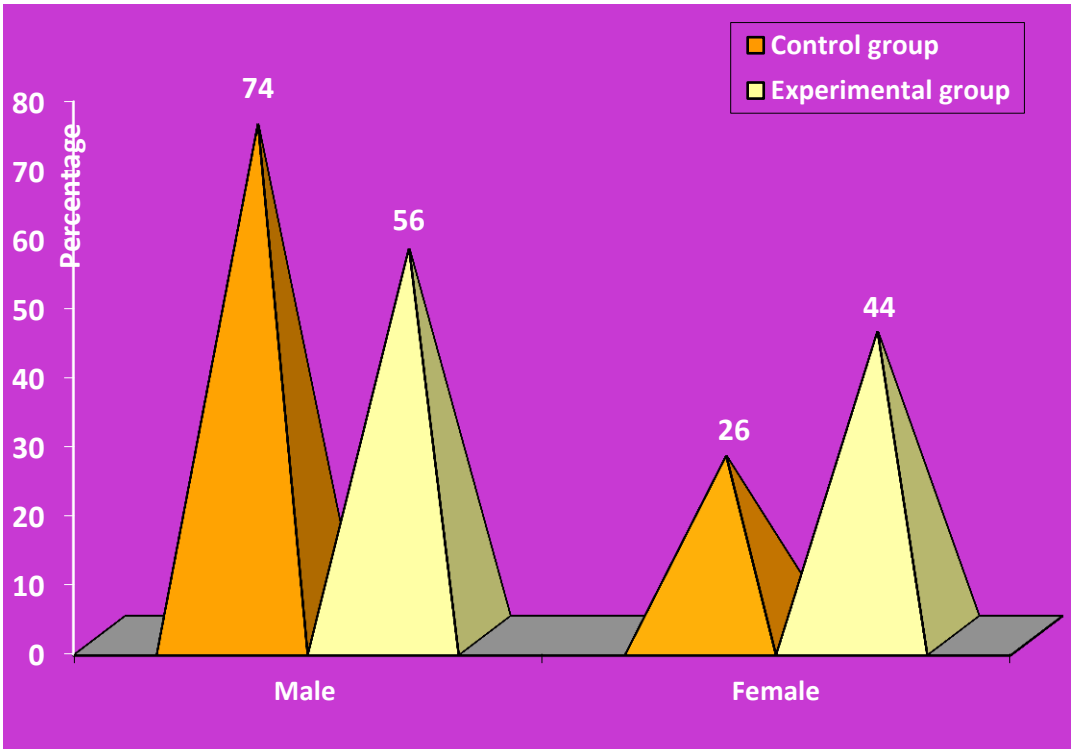



**Fig. 4. percentage distribution of subjects in experimental group and control group according to their sex.**

The above the pyramid diagram shows that majority of subjects were (74%) 37 of them male in control group and (56%) 28 of them were female in experimental group

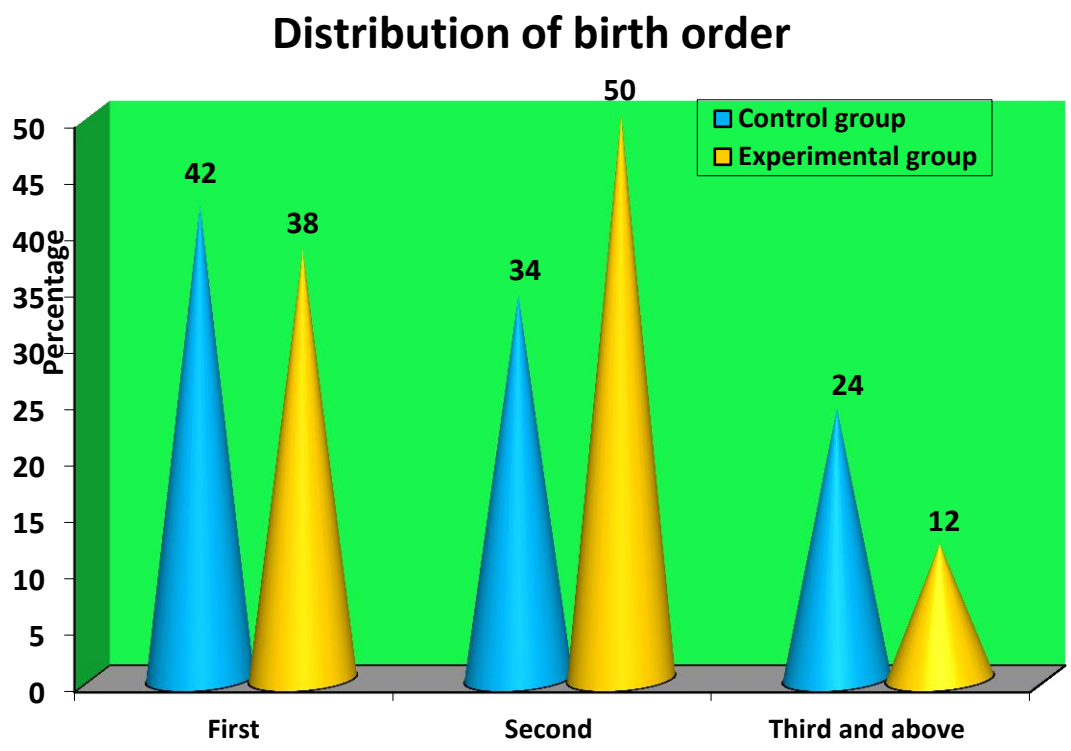



**Fig. 5. percentage distribution of subjects in experimental group and control group according to their Birth order of child.**

The above cone diagram shows that majority of subjects were (42%) 21 of them first order of birth in control group and (50%) 25 of them were second order of birth in experimental group.

## Distribution of place of residence

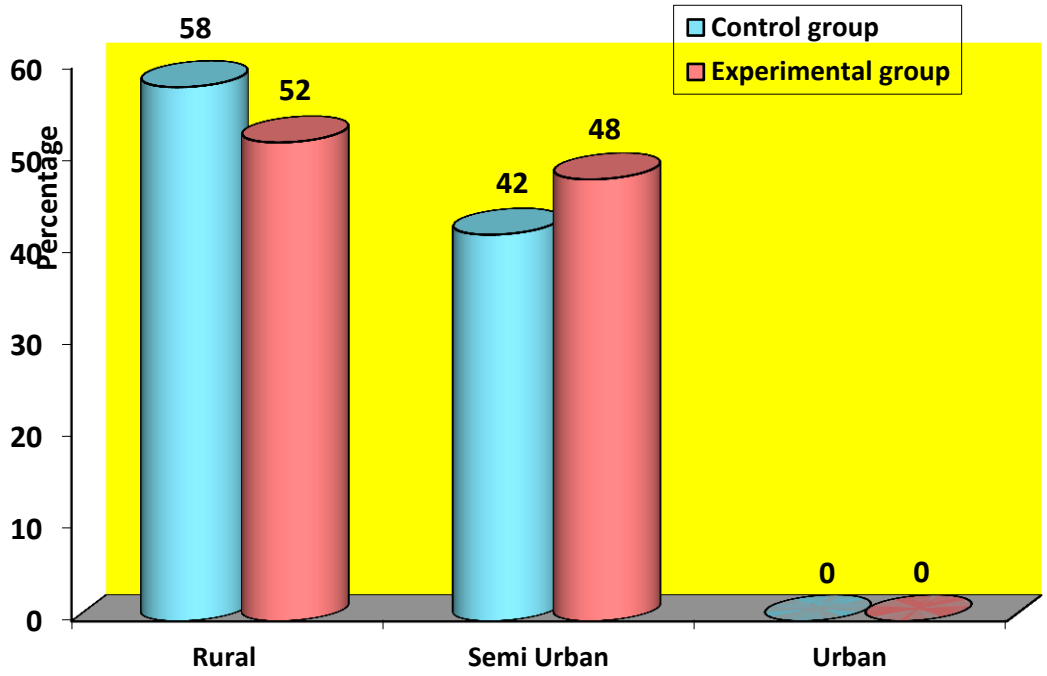



**Fig. 6. Percentage distribution of subjects in experimental group and control group according to their place of residence.**

The above cylindrical bar diagram shows that majority of the subjects were (58%) 29 of their living in rural in control group and (52%) 26 of them living in urban in experimental group.

# Distribution of Type of family

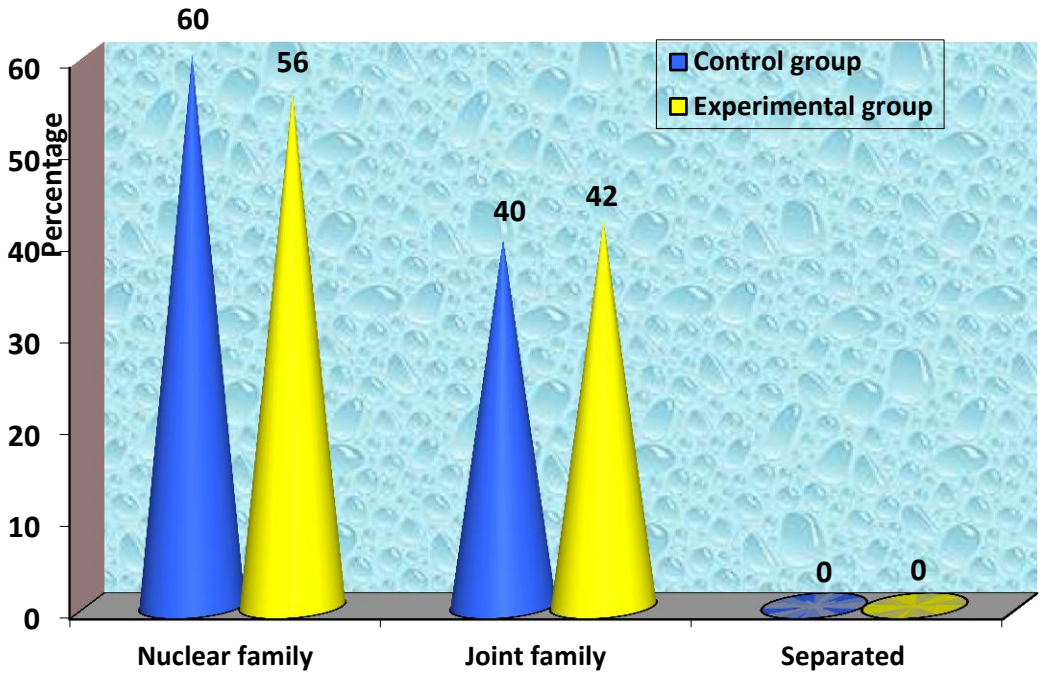



**Fig. 7. Percentage distribution of subjects in experimental group and control group according to their type of family.**

The above diagram shows that majority of subjects were (60%) 30 of them were belongs to nuclear family in control group and (56%) 28 of them were belongs to nuclear in experimental group.

## Distribution of Mothers educational status

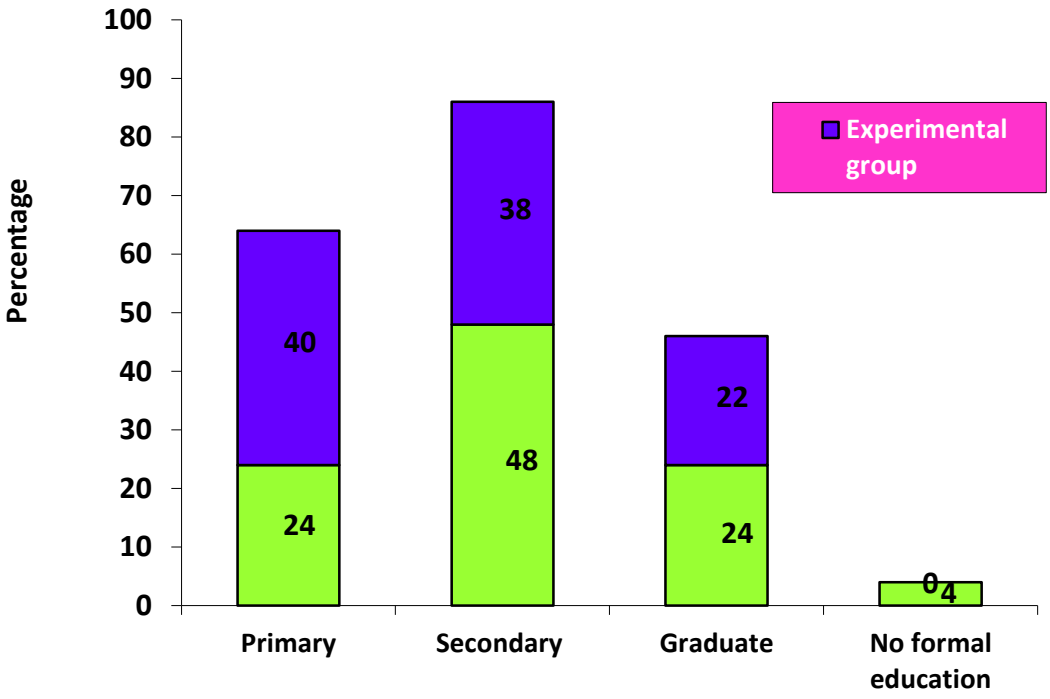



**Fig. 8. Percentage distribution of subjects in experimental group and control group according to their mothers educational status.**

The above diagrams shows that majority of subjects were (48%) 24 of them have secondary education in control group and (40%) 20 of them have primary education in experimental group.

## Distribution of Fathers educational status

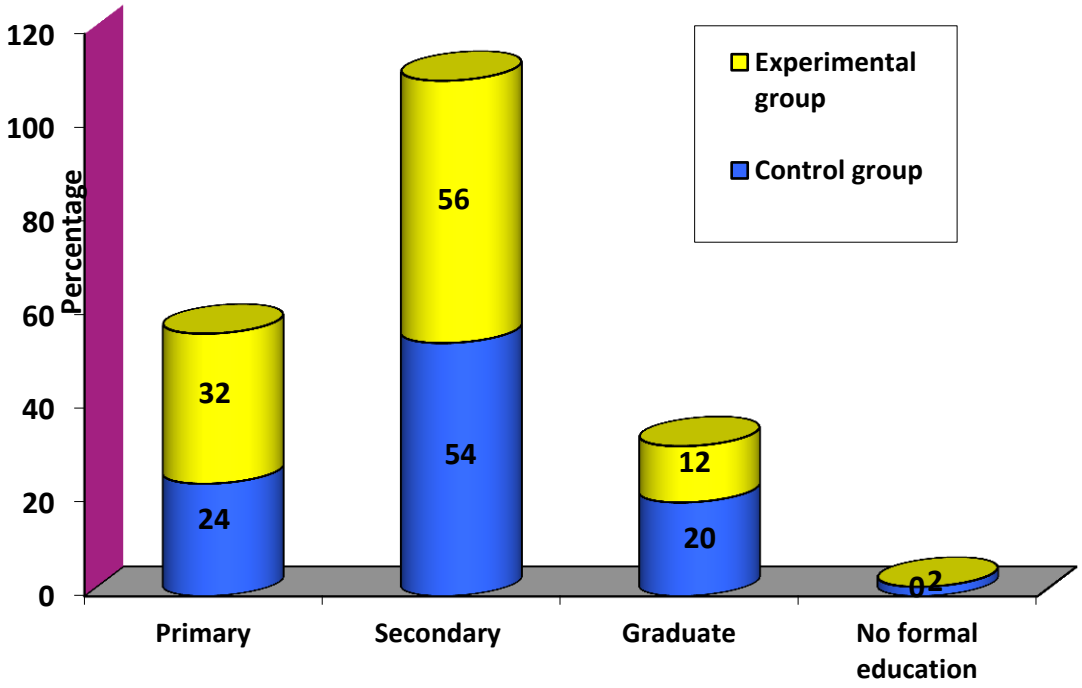



**Fig. 9. Percentage distribution of subjects in experimental group and control group according to their fathers educational status.**

The above bar diagram shows that majority of subjects were (54%) 27 of them have secondary education in control group and (56%) 28 of them have secondary education in experimental group.

# Distribution of Income of the family

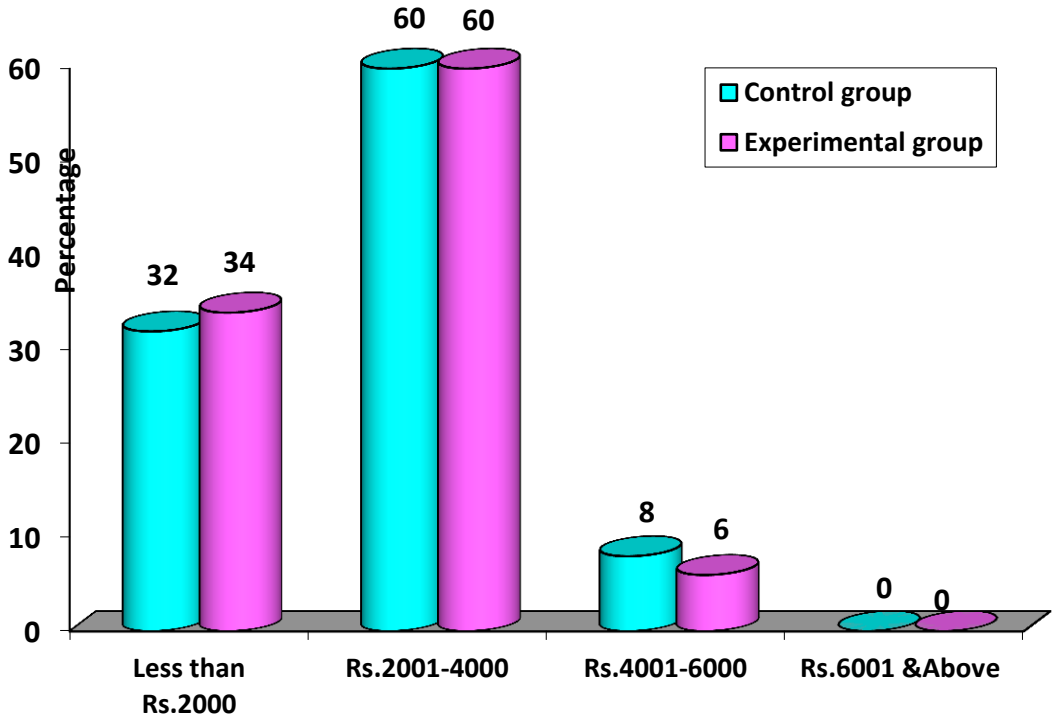



**Fig. 10. Percentage distribution of subjects in experimental group and control group according to their income of the family.**

The above cylindrical bar diagram shows that majority of subjects were (60%) 30 of monthly income were Rs.2001-4000 in control group and (60%) 30 of them monthly income were Rs.2001-4000 in experimental group.

# Distribution of Pet animal at home

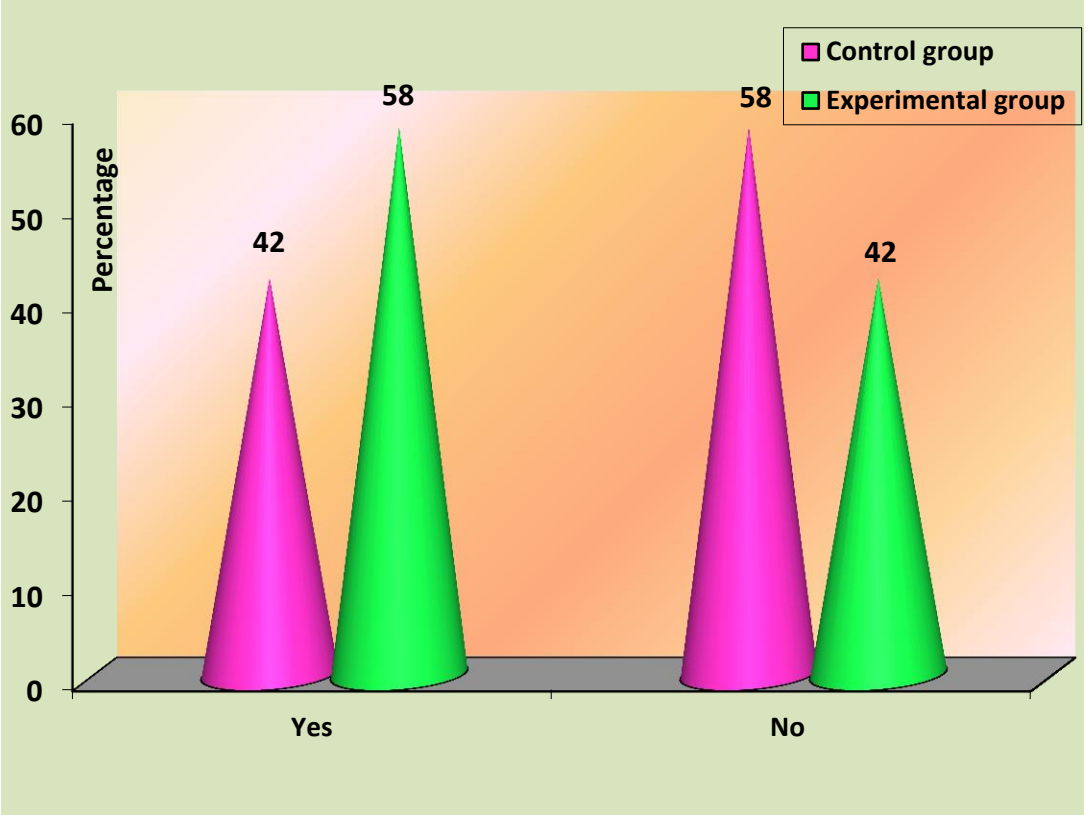



**Fig. 11. Percentage distribution of subjects in experimental group and control group according to their pet animal at home.**

he above cone diagram shows that majority of subjects were (58%) 29 of them have pet animal at home in control group and (58%) 29 of them don't have pet animal at home in experimental group.

## Distribution of previous experience of Anti rabies vaccine

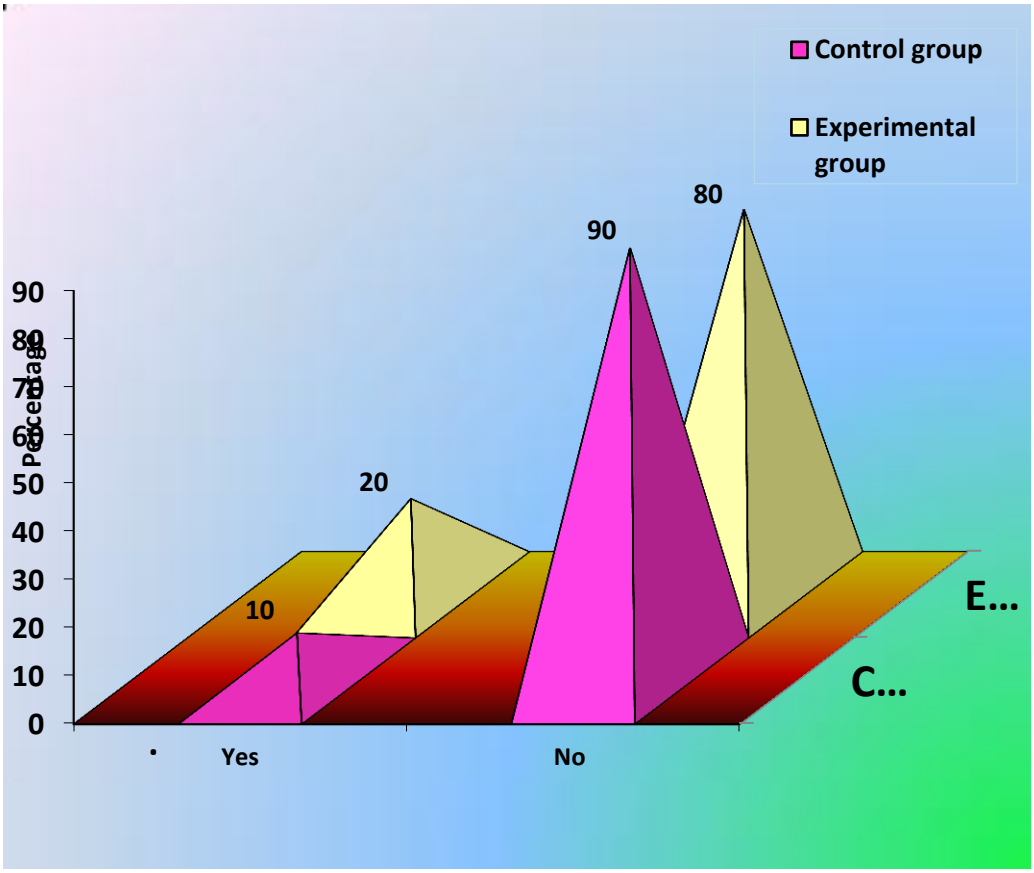



**Fig. 12. Percentage distribution of subjects in experimental group and control group according to their previous experience of anti rabies vaccine immunization**

The above cone diagram shows the majority of subjects were (90%) 45 of them have not previous exposure of anti rabies vaccine immunization in control group and (80%) 40 of them have not previous exposure of anti rabies vaccine immunization in experimental group.

## Distribution of Nuture of the child

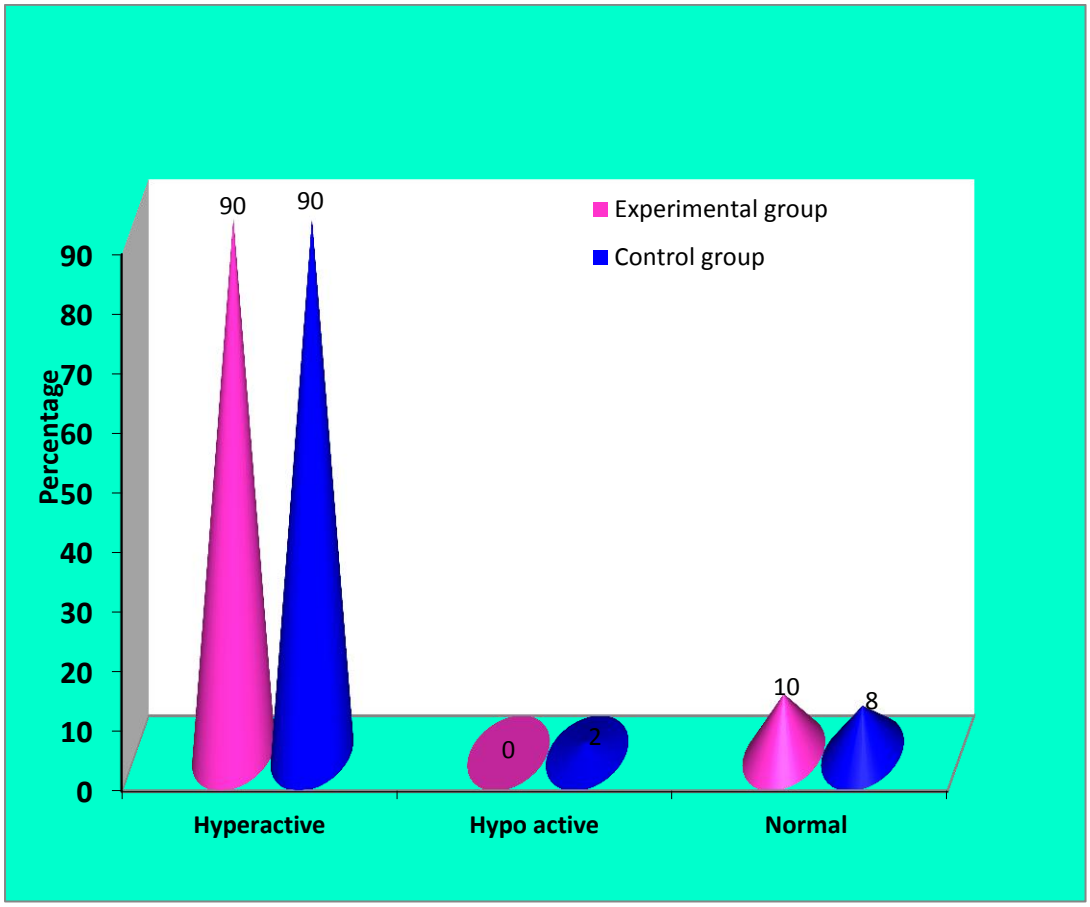



**Fig. 13. Percentage distribution of subjects in experimental group and control group according to their nature of the child.**

The above diagram shows that majority of subjects were (90%) 45 of them have hyperactive children in control group and (90%) 45 of them have hyperactive children in experimental group.

# Distribution of type of bite

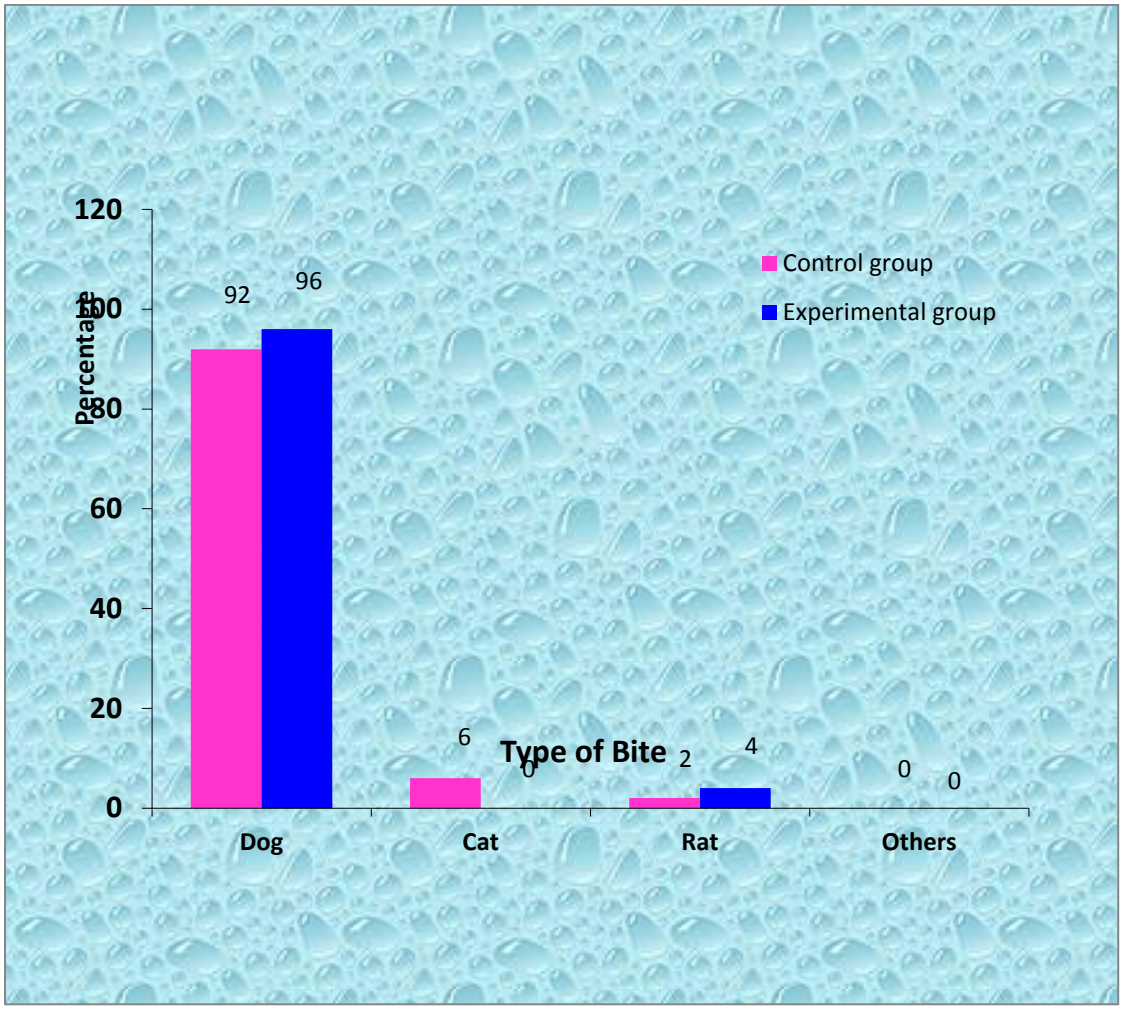



**Fig. 14. Percentage distribution of subjects in experimental group and control group according to their type of bite.**

The above bar diagram shows that majority of subjects were (92%) 46 of them have dog bite in control group and (96%) 48 of them have dog bite in experimental group.

## SECTION II

## Description of level of pain among children receiving anti rabies vaccine injection.

# Table -2

### Frequency and percentage distribution of post test level of pain among control group

**n=50**

| Level of pain | Control post test | | Experimental posttest | |
|---|---|---|---|---|
| | f | % | F | % |
| No pain | 0 | 0 | 0 | 0 |
| Mild | 2 | 4 | 28 | 56 |
| Moderate | 8 | 16 | 16 | 32 |
| Severe | 19 | 38 | 2 | 4 |
| Very severe | 19 | 38 | 3 | 6 |
| Worst | 2 | 4 | 1 | 2 |
| Total | 50 | 100 | 50 | 100 |

In the post test (16%) 8 of the children were having moderate pain and (38%) 19 of the children were having severe pain, (38%) 19 of the children having very severe pain, (4%) 2 of the children having worst pain in control group, and (56%)28 of the children were having mild pain, (32%) 16 of them having moderate pain , (4%) 2 of them having severe pain, (6%) 3 of them having very severe pain, (2%) 1 of them having worst pain in experimental group.

# Distribution of Level of Pain

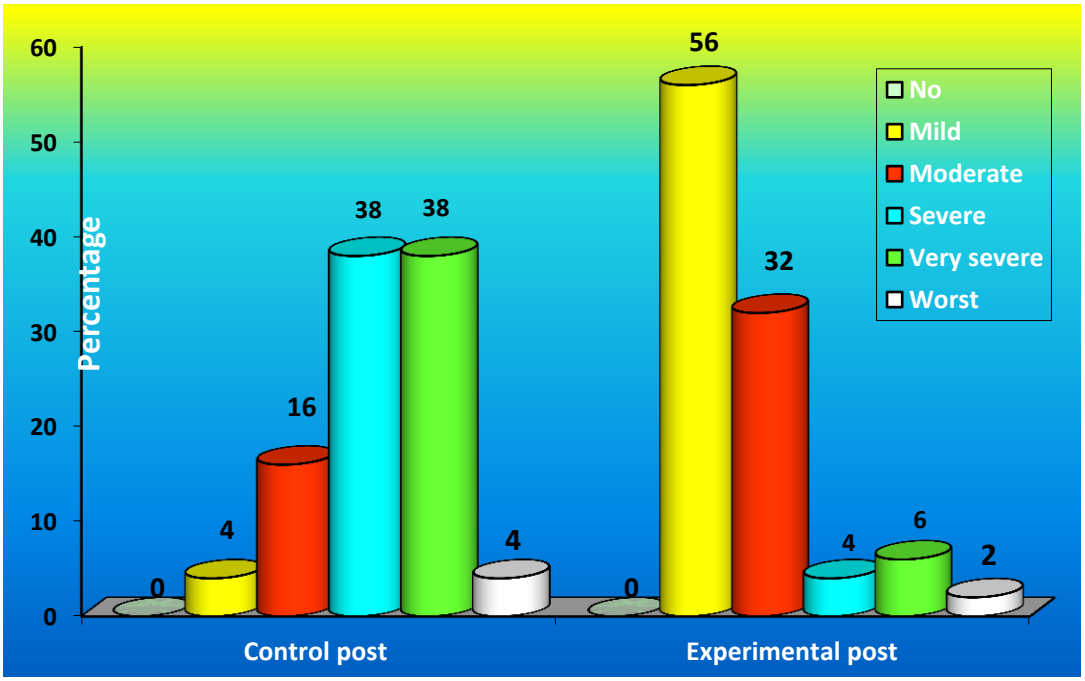



**Fig. 15. Percentage distribution of subjects according to their level of pain among children receiving anti rabies vaccine injection .**

In the post test majority (38%) 19 of the children were having sever pain and (38%) 19 of the children were having very severe pain in control group, and (56%)28 of the children were having mild pain in experimental group.

# Section III

## Effectiveness of distraction tactics on level of pain among children receiving anti rabies vaccine injection.

## Table 3

**Mean and standard deviation of post test level of pain among children receiving anti rabies vaccine injection in control and experimental group.**

**n=100**

| Level of pain | Max score | Control post test score | | | Experimental - Post test scores | | | Difference in mean % |
|---|---|---|---|---|---|---|---|---|
| | | Mean | SD | Mean % | Mean | SD | Mean % | |
| Overall | 10 | 6.06 | 1.71 | 61 | 2.8 | 1.79 | 28 | 33 |

The above table showed that mean in the control and experimental group was 6.06 and 2.8 and standard deviation in the control and experimental group was 1.71 and 1.79 respectively. The mean difference was 33.

\

# Table 4

**Comparison of the post test level of pain among children receiving anti rabies vaccine injection in control and experimental group.**

**n= 100**

| Level of pain | Control post test | | Experimental post test | | Mean difference | t'-value | P-value |
|---|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | | | |
| Overall | 6.06 | 1.71 | 2.8 | 1.79 | 3.26 | 9.304 | P<0.001*** |

**(*-P<0.05 ,significant and **-P<0.01 &***-P<0.001 , Highly significant )**

The above table reveals that post test score of mean and SD of control group 6.06 and 1.71. and post test score of mean and SD of experimental group 2.8 and 1.79. The mean difference of control and experimental group was 3.26 and the t value was 9.304 and the p value is significant at 0.001.

## Section IV

## Association between the level of pain among children receiving anti rabies vaccine injection with their selected socio demographic variables and clinical variables in experimental group

## Table -6

**Association between the post test level of pain among children receiving anti rabies vaccine injection with their selected socio demographic variables in experimental group.**

**n=50**

| Demographic variables | Mild | | Moderate | | Severe | | Very Severe | | Worst | | χ2 | p-value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | F | % | F | % | f | % | f | % | f | % | | |
| **Age of the child (in years):** | | | | | | | | | | | | |
| 3-4 | 3 | 6 | 3 | 6 | 2 | 4 | 3 | 6 | 0 | 0 | 22.63 | 0.004** |
| 4-5 | 9 | 18 | 4 | 8 | 0 | 0 | 0 | 0 | 1 | 2 | (df=8) | S |
| 5-6 | 16 | 32 | 9 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| **Sex of the child** | | | | | | | | | | | | |
| Male | 17 | 34 | 8 | 16 | 1 | 2 | 2 | 10 | 0 | 0 | 1.92 | 0.749 |
| Female | 11 | 22 | 8 | 16 | 1 | 2 | 1 | 2 | 1 | 2 | (df=4) | NS |
| **Birth order of the child:** | 9 | 18 | 7 | 14 | 1 | 2 | 2 | 4 | 0 | 0 | 7.07 | 0.529 |
| First | 13 | 26 | 9 | 18 | 1 | 2 | 1 | 2 | 1 | 2 | (df=8) | NS |
| Second | 6 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Third and above | | | | | | | | | | | | |
| **Place of residence :** | | | | | | | | | | | | |
| Rural | 16 | 32 | 9 | 18 | 0 | 0 | 1 | 2 | 0 | 0 | 4.08 | 0.395 |
| Urban | 12 | 24 | 7 | 14 | 2 | 4 | 2 | 4 | 1 | 2 | (df=4) | NS |
| **Type of Family:** | | | | | | | | | | | | |
| Nuclear family | 13 | 26 | 13 | 26 | 1 | 2 | 1 | 2 | 0 | 0 | 10.72 | 0.218 |
| Joint family | 15 | 30 | 2 | 4 | 1 | 2 | 2 | 4 | 1 | 2 | (df=8) | NS |
| Extended family | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| **Mothers education status:** | | | | | | | | | | | | |
| Primary | 15 | 30 | 4 | 8 | 1 | 2 | 0 | 0 | 0 | 0 | 17.37 | 0.026* |
| Secondary | 8 | 16 | 9 | 18 | 1 | 2 | 0 | 0 | 1 | 2 | (df=8) | S |
| Graduate | 5 | 10 | 3 | 6 | 0 | 0 | 3 | 6 | 0 | 0 | | |
| No formal education | | | | | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fathers Educational status:** | 10 | 20 | 4 | 8 | 1 | 2 | 1 | 2 | 0 | 0 | 11.94 | 0.154 |
| Primary | 17 | 34 | 9 | 18 | 1 | 2 | 1 | 2 | 0 | 0 | (df=8) | NS |
| Secondary | 1 | 2 | 3 | 6 | 0 | 0 | 1 | 2 | 1 | 2 | | |
| Graduate | | | | | | | | | | | | |
| No formal education | | | | | | | | | | | | |
| **Income of the family** | | | | | | | | | | | | |
| Less than Rs.2000 | 10 | 20 | 5 | 10 | 1 | 2 | 0 | 0 | 1 | 2 | 7.38 | 0.496 |
| Rs.2001-4000 | 17 | 34 | 10 | 20 | 1 | 2 | 2 | 4 | 0 | 0 | (df=8) | NS |
| Rs.4001-6000 | 1 | 2 | 1 | 2 | 0 | 0 | 1 | 2 | 0 | 0 | | |
| Rs.6001 & above | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| **Pet animal at home:** | | | | | | | | | | | | |
| Yes | 17 | 34 | 8 | 16 | 1 | 2 | 2 | 4 | 1 | 2 | 1.37 | 0.849 |
| No | 11 | 22 | 8 | 16 | 1 | 2 | 1 | 2 | 0 | 0 | (df=4) | NS |
| **Previous experience** anti rabies vaccine immunization: | 8 | 16 | 1 | 2 | 0 | 0 | 1 | 2 | 0 | 0 | 4.26 | 0.372 |
| Yes | 20 | 40 | 15 | 30 | 2 | 4 | 2 | 4 | 1 | 2 | (df=4) | NS |
| No | | | | | | | | | | | | |
| **Nature of the child** | | | | | | | | | | | | |
| Hyperactive | 25 | 50 | 14 | 28 | 2 | 4 | 3 | 6 | 1 | 2 | 0.79 | 0.939 |
| Hypo Active | 3 | 6 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | (df=4) | NS |
| Normal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| **Type of bite :** | | | | | | | | | | | | |
| Dog | 26 | 52 | 16 | 32 | 2 | 4 | 3 | 6 | 1 | 2 | 1.64 | 0.802 |
| Cat | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (df=4) | NS |
| Rat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Others | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |

**(*-P<0.05 ,significant and **-P<0.01 &***-P<0.001 , Highly significant )**

The above table reveals that there is significant association between the post test pain level and selected socio demographic variable such as age of the child, mothers educational status and there is no significant association between the post test pain level and selected socio demographic variables such as age sex of the child, birth order of the child, place of residence, type of family, fathers educational status, income of the family and pet animal at home, previous experience anti rabies vaccine immunization, nature of the child. Type of bite.

# *DISCUSSION*

# CHAPTER V

# DISCUSSION

This chapter deals with the findings of the study based on the interpretation of the statistical analysis. The findings were discussed in relation to the objectives of the study. Pain is the unpleasant sensory stimulation, especially in children. It will shape their behavior in the future. The pain in children was underestimated and untreated in many clinical settings. The role of the nurses is very important role in managing the pain in children especially receiving anti rabies vaccine injection. It helps the child to develop confidence, cooperation and to reduce the anxiety during hospital procedures. The family also needs to manage the child during the painful procedures.

Health care professionals as much have to set the responsibility to reduce the pain and anxiety as much as possible. A Non- Pharmacological procedure shows very effective in managing the pain. Cultural factors affect the pain perception in the children. Hence, this study was undertaken to determine the effectiveness of kaleidoscopic distraction on pain among post-operative children on the first and second post operative day. The tool used for data collection was validated by the experts in the department of Pediatric Surgery and Nursing. Reliability of the tool was assessed by using inter rater reliability correlation coefficient. The instrument was found to be reliable. The purpose of the study is to evaluate effectiveness of distraction tactics on pain among children receiving anti rabies vaccine injection at outpatient department, GRH Madurai

The aim of the study was evaluate the effectiveness of distraction tactics on pain among children receiving anti rabies vaccine injection at outpatient department, GRH Madurai.

**The objectives of the study were to**

- To evaluate the effectiveness of displaying distraction tactics on pain among children receiving anti rabies vaccine injection at outpatient department GRH Madurai.
- To associate the level of pain among children receiving anti rabies vaccine injection at outpatient department GRH Madurai with their selected socio demographic variables.

**The following hypothesis were set for the study**

**All the hypotheses were tested at @ 0.05 level**

- $H_1$: There is a significant difference in the post test level of pain between experimental group and control group among children receiving anti rabies vaccine injection at outpatient department GRH Madurai.
- $H_{2:}$ There is a significant association between the level of pain among children receiving anti rabies vaccine injection at outpatient department with their selected demographic and clinical variables.

## 5.1 Socio demographic details of the study

Considering the age wise distribution of children in the experimental group (22%) 11 children were in 3-4 years of age, (28%) 14 children were 4-5 years of age and ((50%) 25 children were 5-6 years of age. In the control group (16%) 8 children

were in 3-4 years of age, (18%) 9 children were 4-5 years of age, (66%) 33 children were 5-6 years of age.

Regarding sex wise distribution in experimental group (56%) 28 were male children and (44%) 22 were female children. In the control group (74%) 37 were male children and (26%) 13 were female children participated in the study.

Based on the birth order wise distribution in experimental group (38%) 19 children were born as first order, (50%) 25 children were born as second order and (12%) 6 children were born as third and above. In the control group (42%) 21 children were born as first order, (34%) 17 children were born as second order and (24%) 12 children were born as third and above.

Based on the place of residence in the experimental group (52%) 26 children were lives in rural area and (48%) 24 children were lives in urban area. In the control group (58%) 29 children were lives in rural area and (42%) 21 children were lives in urban area.

On the basis of type of family in the experimental group (56%) 28 children were belongs to nuclear family, (42%) 21 children were belongs to joint family and (0%) 0 children were belongs to extended family. In the control group ( 60%) 30 children were belongs to nuclear family, (40%) 20 children were belongs to joint family and (0%) 0 children were belongs to extended family.

Regarding the educational status of the mother in the experimental group (40%) 20 mothers were primary education , (38%) 19 mothers having secondary education and (22%) 11 mothers having graduate, (0%) 0 mother having no formal education. In the control group (24%) 12 mothers were primary education , (48%) 24

mothers having secondary education and (20%) 10 mothers having graduate, (4%) 2 mother having no formal education.

Regarding the educational status of the fathers in the experimental group (32%) 16 fathers were primary education , (56%) 28 fathers having secondary education and (12%) 6 fathers having graduate, (0%) 0 fathers having no formal education. In the control group (24%) 12 fathers were primary education , (54%) 27 fathers having secondary education and (20%) 10 fathers having graduate, (2%) 1 fathers having no formal education.

When considering the income of the family in the experimental group (34%) 17 of them have less than Rs.2000 per month, (60%) 30 of the have Rs. 2001 – 4000 per month and (6%) 3 of them have Rs.4001-6000 and (0%) 0 of them have Rs 6001 and above. In the control group (32%) 16 of them have less than Rs.2000 per month, (60%) 30 of the have Rs. 2001 – 4000 per month and (8%) 4 of them have Rs.4001-6000 per month and (0%) 0 of them have Rs 6001 and above per month.

While discussing pet animal at home in the experimental group (58%) 29 were having pet animal at home, (42%) 21 were not having pet animal at home. In the control group (42%) 21 were having pet animal at home, (58%) 29 were not having pet animal at home.

Regarding the previous experience of anti rabies vaccine immunization in experimental group (20%) 10 were having previous experience of anti rabies vaccine immunization and (80%) 40 were not having previous experience of anti rabies vaccine immunization. In control group (10%) 5 were having previous experience of anti rabies vaccine immunization and (90%) 45 were not having previous experience of anti rabies vaccine immunization.

When comparing the nature of the child in experimental group (90%) 45 were in hyper active, (0%) 0 were in hypo active and (10%) 5 were normal. In control group (90%) 45 were in hyper active, (2%) 1 were in hypo active and (8%) 4 were normal.

On the basis of type of bite in experimental group (96%) 48 were children having dog bite, (0%) 0 were children having cat bite, and (4%) 2 were children having rat bite, (0%) 0 were children having others type of bite. In control group (92%) 46 were children having dog bite, (6%) 3 were children having cat bite, and (2%) 1 were children having rat bite, (0%) 0 were children having others type of bite.

## 5.2 Discussion of the study based on the objectives

**The first objective of the study was to evaluate the effectiveness of displaying distraction tactics on pain among children receiving anti rabies vaccine injection at outpatient department GRH Madurai.**

In the post test (16%) 8 of the children were having moderate pain and (38%) 19 of the children were having severe pain, (38%) 19 of the children having very severe pain, (4%) 2 of the children having worst pain in control group, and (56%)28 of the children were having mild pain, (32%) 16 of them having moderate pain , (4%) 2 of them having severe pain, (6%) 3 of them having very severe pain, (2%) 1 of them having worst pain in experimental group. . None of them no pain.

The above table reveals that post test score of mean and SD of control group 6.06 and 1.71. and post test score of mean and SD of experimental group 2.8 and 1.79. The mean difference of control and experimental group was 3.26 and the t value was 9.304 and the p value is highly significant at 0.001.

The unpaired ‘t’ test value showed statistically significant reduction in the level of pain children receiving anti rabies vaccine injection (t= 9.304 and p < 0.001), which was highly significant . the calculated value was more than the table value, and indicate the distraction tactics was effective in reducing level of pain among children receiving anti rabies vaccine injection.

The present study findings was consistent by a study done by Dr.R.Shankar, Shanmugam, the study was to determine the effect of Distraction Techniques upon Pain among Children receiving immunization. A quasi -experimental, post -test only control group design was adopted. Based on the inclusion criteria purposive sampling technique was used to select ninety children and equally divided in to three groups. Experimental group I received the distraction technique of sound producing toy, experimental group II received playing of familiar music and where as control group received the routine care. The acute pain observed and scored by using FLACC behavioral pain assessment scale and Wong’s-Baker faces pain rating scale. Results: In Group I, 90 % children had moderate pain and 10% had severe pain. In Group II, 80 % children had moderate pains and 20% had severe pain where as in Group III (control group), nearly half of children (46.7%) had moderate pain and 53.3% had severe pain. Mean pain score in Group I was 10.63, 12.77 in Group II and 15.13 in Group III. The obtained ‘t’ value is 8.49 and 4.49 which is significant at 0.001 level. Conclusion: Hence the percentage difference score was 22.50 in group I and 11.80% in group II reveals that toy distraction technique (group I) was effective than music therapy (Group II) in children receiving immunization.

**Thus the Hypotheses - $H_1$ "There is a significant difference in the post test level of pain between experimental group and control group among children receiving anti rabies vaccine injection" was accepted.**

Post test score of mean and SD of control group 6.06 and 1.71. and post test score of mean and SD of experimental group 2.8 and 1.79. The mean difference of control and experimental group was 3.26 and the t value was 9.304 and the p value is highly significant at 0.001.

**The second objective was to associate the level of pain among children receiving anti rabies vaccine injection at outpatient department GRH Madurai with their selected socio demographic variables.**

Statistical significance was calculated by using Chi square test. The study results revealed that, There was a significant association between the post test pain level and selected socio demographic variable such as type of bite($\chi^{2=}$ 31.94 ) in experimental, age of the child ($\chi^{2=}$ 22.63), mothers educational status ($\chi^{2=}$ 17.37 ) in control group.

The present study findings was supported by a study done by Rasha Srouji, Savithiri Ratnapalan, and Suzan Schneeweiss**,** conducted a study Pain in Children: Assessment and Nonpharmacological Management in this articles various pain assessment scale was used in different age group to assess the pain level in according to their age group . a discussion of the importance of pain in control and distraction techniques during painful procedures are presented. Age specific nonpharmacological interventions used to manage pain in children are most effective when adapted to the developmental level of the child. Distraction techniques are often

provided by nurses, parents or child life specialists and help in pain alleviation during procedures.

**Thus the Hypotheses- $H_2$: "There is a significant association between the level of pain among children receiving anti rabies vaccine injection at outpatient department with their selected demographic and clinical variables" was accepted.**

# *SUMMARY, CONCLUSION, IMPLICATIONS & RECOMMENDATIONS*

# CHAPTER VI

# SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

This chapter deals with the summary of the study and the conclusion drawn. It clarifies the limitations of the study. The implications and recommendations are given for different areas of Nursing such as practice, education, research and administration in the Health care delivery system.

## 6.1 Summary of the study

## Statement of the Problem

"A study to evaluate the effectiveness of distraction tactics on pain among children receiving anti rabies vaccine injection at outpatient department, GRH Madurai."

**The following objectives were set for the study**

- To evaluate the effectiveness of displaying distraction tactics on pain among children receiving anti rabies vaccine injection at outpatient department GRH Madurai.
- To associate the level of pain among children receiving anti rabies vaccine injection at outpatient department GRH Madurai with their selected socio demographic variables.

**The following hypothesis were test @ 0.05 level**

- $H_1$: There is a significant difference in the post test level of pain between experimental group and control group among children receiving anti rabies vaccine injection at outpatient department GRH Madurai.

- $H_{2:}$ There is a significant association between the level of pain among children receiving anti rabies vaccine injection at outpatient department with their selected demographic and clinical variables.

**The study was based on the assumption that**

Children will have different level of pain while receiving anti rabies vaccine injection

**The variables studied were**

Independent variable : Distraction tactics

Dependent variable : children receiving anti rabies vaccine injection.

Extensive literature review and studied from primary and secondary focus regarding the effects of distraction tactics on pain among children receiving anti rabies vaccine injection provided evidence based guidance for the study. This has helped to design the methodology, develop the tool for data collection and the protocol for administering distraction tactics. . The conceptual framework developed for the study was based on the modified Roy's Adaptation theory. The researcher adopted the true experimental research design to evaluate the effectiveness of displaying distraction tactics on pain among children receiving anti rabies vaccine injection, Children 3-6 years. The consecutive sampling technique was used and sample are assigned in systemic random sampling was used to select 100 samples based on inclusion criteria. A pilot study was conducted on ten samples to find out the appropriateness and feasibility of conducting the study and it was found feasible.

The data collection was made for 6 weeks in the pediatric surgical outpatient department, in Institute of Child Health and Research centre, at GRH, Madurai. Formal permission was obtained from the Director of the Institute and Head of the

Department of Pediatric Surgery in Institute of Child Health and Research centre, at GRH, Madurai.

Adequate privacy was provided during the procedure control group level of pain among children receiving anti rabies vaccine injection were assessed with the help of Wong beaker pain rating Scale in control group. Intervention was given to experimental group, Distraction tactics were displayed for 5-10. Post test level of among children receiving anti rabies vaccine injection Pain reassessed with the help wong beaker pain rating Scale in experimental group.

Descriptive (Percentage distribution, mean, standard deviation) and inferential statistics (t-test, Pearson ,Chi square test) were used to analyze the data and to test hypothesis. The data were then interpreted and discussed based on the objectives of the study, hypotheses and relevant studies from the literature reviewed.

## 6.2. Major findings of the study were

Considering the age wise distribution of children in the experimental group (22%) 11 children were in 3-4 years of age, (28%) 14 children were 4-5 years of age and ((50%) 25 children were 5-6 years of age. In the control group (16%) 8 children were in 3-4 years of age, (18%) 9 children were 4-5 years of age, (66%) 33 children were 5-6 years of age.

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When comparing the nature of the child in experimental group (90%) 45 were in hyper active, (0%) 0 were in hypo active and (10%) 5 were normal. In control group group (90%) 45 were in hyper active, (2%) 1 were in hypo active and (8%) 4 were normal.

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In experimental group mean level of pain (2.8) was higher than the control group mean level of pain (6.06), the mean difference of experimental and control group was 3.26 the calculated t-value was 9.304 and p- value was <(0.001) level of significance.

There was significant association between the posttest pain levels and selected socio demographic variables such as type of bite($\chi^{2=}$ 31.94 ) in experimental, age of the child ($\chi^{2=}$ 22.63), mothers educational status ($\chi^{2=}$ 17.37 ) in control group.

There is no significant association between the post test pain levels and the selected socio demographic variables such as age of the child (in year), sex of the child, birth order of the child, place of residence, type of family, mothers educational status, fathers educational status, income of the family and pet animal at home, previous experience anti rabies vaccine immunization, nature of the child, in control group. And experimental group such as age sex of the child, birth order of the child, place of residence, type of family, fathers educational status, income of the family and pet animal at home, previous experience anti rabies vaccine immunization, nature of the child, and type of bite.

## 6.3. Conclusion

The study findings statistically proved that the distraction tactics reduces the level of pain among children receiving anti rabies vaccine injection. So the researcher concluded that it can be used as an effective intervention to reduce the level of pain among children receiving anti rabies vaccine injection.

## 6.4. Implications of the study

The implications drawn from the study are of vital concern to the field of Nursing including Nursing service, Nursing Education, Nursing Research and Nursing Administration.

**Nursing Practice**

1. Nurse is the primary care giver and having responsibility in applying the holistic approach while giving the care to the patient. Distraction tactics should include as a part of nursing care.
2. The study finding will help the Nursing personnel to manage the pain in during children receiving anti rabies vaccine injection.
3. Regular timings of distraction tactics should be maintained in pediatric outpatient department settings.

**Nursing Education**

Nursing is an evolving profession every practice is based on evidence based care with adequate knowledge.

1. The nurse educator should teach about the distraction therapies, it is effective and easy to administer.

2. Nurse educators should provide in-service education regarding benefits non-pharmacological methods (especially distraction tactics) of pain management.
3. Nurse educator can conduct Symposium, Seminars regarding the effect of the distraction tactics in pain management in children.

**Nursing Research**

1. Help the Nursing researcher to focus and develop insight on the distraction therapies.
2. To do the further researcher in all children receiving anti rabies vaccine injection.
3. The management should motivate the researchers to find various types of distraction therapies in children receiving anti rabies vaccine injection on the basis of cost effectiveness.

**Nursing Administration**

1. The Nurse administrator should prepare the protocol for distraction therapies especially animation video distraction for the children who are coming to the outpatient department in hospitals.
2. The Nurse administrator should teach about the effectiveness of distraction tactics in pain management among children receiving anti rabies vaccine injection.

## 6.5. Recommendations

1. A similar study can be conducted for all types of immunization outpatient department.
2. The same study can conducted in larger groups in different settings.
3. Comparison study can be done by various distraction therapies.

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# *APPENDICES*

# APPENDIX – I

## Letter seeking permission to conduct a study

**LETTER SEEKING PERMISSION FOR CONDUCTING THE STUDY**

From

T.Sophia,
M.Sc (N) I year student ( Br- II. Child Health Nursing),
College of Nursing,
Madurai Medical College, Madurai – 20.

To

The Director,
Institute of Child Health and Research Centre,
Government Rajaji Hospital,
Madurai Medical College,
Madurai.

Respected Sir,

**Sub :** College of Nursing, Madurai Medical College, Madurai – M.Sc.(N) I year Child Health Nursing Student – Permission for conduct dissertation study- Institute of Child Health and Research Centre, GRH – request – regarding.

**********

As per the Indian Nursing Council and the Tamilnadu Dr. M.G.R. Medical University curriculum requirement all branches of M.Sc Nursing candidates are required to conduct a dissertation study for the partial fulfillment of the P.G Degree course in their respective departments.

I have selected a study topic **"A study to evaluate the effectiveness of distraction tactics on pain among children receiving anti rabies vaccine injection at outpatient department, GRH Madurai."** for my dissertation study; I would like to select patients from the above department.

I assure that I will not interfere with the routine activities of the department.

Hence, I Kindly request you to consider my requisition and permit me to conduct the study.

Thanking you,

Yours obediently,

DATE :
Madurai

(T.SOPHIA)

05/09/2016
DIRECTOR
INSTITUTE OF CHILD HEALTH & RESEARCH CENTRE
GOVT. RAJAJI HOSPITAL
MADURAI-625020

**LETTER SEEKING PERMISSION FOR CONDUCTING THE STUDY**

From

T.Sophia,
M.Sc (N) I year student ( Br- II. Child Health Nursing),
College of Nursing,
Madurai Medical College, Madurai – 20.

To

Head of the department,
Department of pediatric surgery,
Government Rajaji Hospital,
Madurai Medical College,
Madurai.

Respected Sir,

**Sub :**College of Nursing, Madurai Medical College, Madurai – M.Sc.(N) I year
Child Health Nursing Student – Permission for conduct dissertation study- Institute of Child Health and Research Centre, GRH – request – regarding.

**********

As per the Indian Nursing Council and the Tamilnadu Dr. M.G.R. Medical University curriculum requirement all branches of M.Sc Nursing candidates are required to conduct a dissertation study for the partial fulfillment of the P.G Degree course in their respective departments.

I have selected a study topic **"A study to evaluate the effectiveness of distraction tactics on pain among children receiving anti rabies vaccine injection at outpatient department, GRH Madurai."** for my dissertation study; I would like to select patients from the above department.

I assure that I will not interfere with the routine activities of the department.

Hence, I Kindly request you to consider my requisition and permit me to conduct the study.

Thanking you,

Yours obediently,

DATE : 06/9/16
Madurai

(T.SOPHIA)

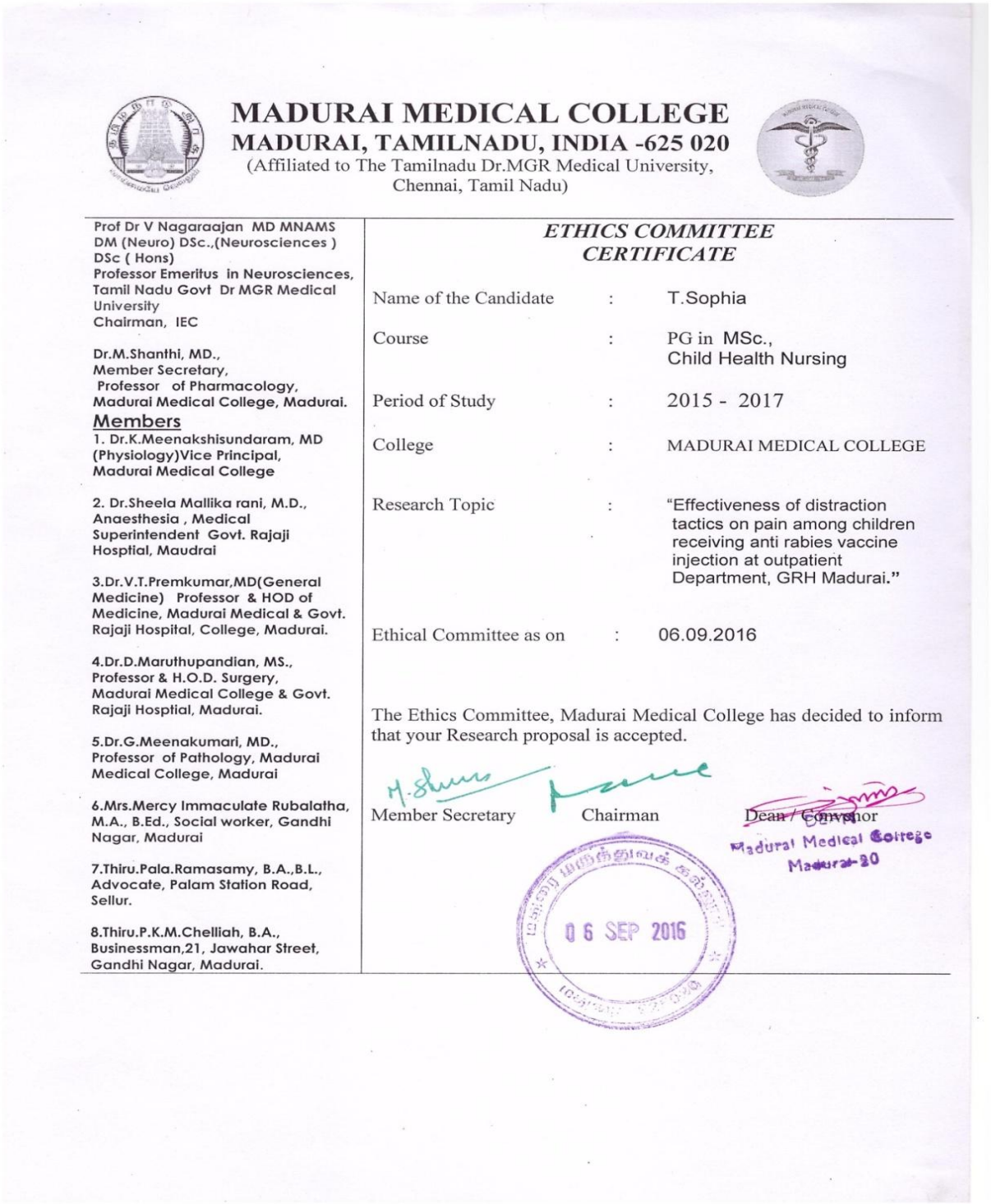
PERMITTED TO CONDUCT THE STUDY IN PED. SUR. WARD AFTER GETTING PERMISSION FROM DEAN & ETHICAL COMMITTEE

6/9/16

Dr. B. HEMANTHKUMAR, M.S.,M.Ch.,
Professor & HOD
Dept. of Paediatric Surgery
Govt. Rajaji Hospital &
Madurai Medical College, Madurai-20

# APPENDIX – II

**Ethical committee approval to conduct a study**



**MADURAI MEDICAL COLLEGE**
**MADURAI, TAMILNADU, INDIA -625 020**
(Affiliated to The Tamilnadu Dr.MGR Medical University, Chennai, Tamil Nadu)

Prof Dr V Nagaraajan MD MNAMS DM (Neuro) DSc.,(Neurosciences ) DSc ( Hons)
Professor Emeritus in Neurosciences, Tamil Nadu Govt Dr MGR Medical University
Chairman, IEC

Dr.M.Shanthi, MD.,
Member Secretary,
Professor of Pharmacology,
Madurai Medical College, Madurai.

Members

1. Dr.K.Meenakshisundaram, MD (Physiology)Vice Principal, Madurai Medical College

2. Dr.Sheela Mallika rani, M.D., Anaesthesia , Medical Superintendent Govt. Rajaji Hosptial, Maudrai

3.Dr.V.T.Premkumar,MD(General Medicine) Professor & HOD of Medicine, Madurai Medical & Govt. Rajaji Hospital, College, Madurai.

4.Dr.D.Maruthupandian, MS., Professor & H.O.D. Surgery, Madurai Medical College & Govt. Rajaji Hosptial, Madurai.

5.Dr.G.Meenakumari, MD., Professor of Pathology, Madurai Medical College, Madurai

6.Mrs.Mercy Immaculate Rubalatha, M.A., B.Ed., Social worker, Gandhi Nagar, Madurai

7.Thiru.Pala.Ramasamy, B.A.,B.L., Advocate, Palam Station Road, Sellur.

8.Thiru.P.K.M.Chelliah, B.A., Businessman,21, Jawahar Street, Gandhi Nagar, Madurai.

***ETHICS COMMITTEE CERTIFICATE***

| | | |
|---|---|---|
| Name of the Candidate | : | T.Sophia |
| Course | : | PG in MSc., Child Health Nursing |
| Period of Study | : | 2015 - 2017 |
| College | : | MADURAI MEDICAL COLLEGE |
| Research Topic | : | "Effectiveness of distraction tactics on pain among children receiving anti rabies vaccine injection at outpatient Department, GRH Madurai." |
| Ethical Committee as on | : | 06.09.2016 |

The Ethics Committee, Madurai Medical College has decided to inform that your Research proposal is accepted.

Member Secretary  Chairman  Dean / Convenor

Madurai Medical College
Madurai-20

06 SEP 2016

# APPENDIX - III

## Content validity certificates

CONTENT VALIDITY CERTIFICATE

**This is to certify that the tool**

**SECTION A : demographic data**

**SECTION B : Standardized pain assessment scale**

Prepared for data collection by Ms.T.Sophia., II year M.Sc(Nursing) student, college of Nursing, Madurai Medical college, Madurai, who has undertaken the study field on thesis entitled **" A study to evaluate the Effectiveness of distraction tactics on pain among children receving anti rabies vaccine injection at outpatient department, GRH Madurai."** has been validated by me.

SIGNATURE OF THE EXPERT 03/03/2017

NAME : Dr. K. MATHIARASAN. M.D.D.C.H

DESIGNATION :

ADDRESS :

DATE :

DIRECTOR
INSTITUTE OF CHILD HEALTH &
RESEARCH CENTRE
GOVT. RAJAJI HOSPITAL
MADURAI-625020

**CONTENT VALIDITY CERTIFICATE**

**This is to certify that the tool**

**SECTION A : demographic data**

**SECTION B : Standardized pain assessment scale**

Prepared for data collection by Ms.T.Sophia., II year M.Sc(Nursing) student, college of Nursing, Madurai Medical college, Madurai, who has undertaken the study field on thesis entitled **" A study to evaluate the Effectiveness of distraction tactics on pain among children receving anti rabies vaccine injection at outpatient department, GRH Madurai."** has been validated by me.

SIGNATURE OF THE EXPERT

Dr. B. HEMANTHKUMAR, M.S.,M.Ch.,
Professor & HOD
Dept. of Paediatric Surgery
Govt. Rajaji Hospital &
Madurai Medical College, Madurai-20

NAME :

DESIGNATION :

ADDRESS :

DATE : 03/3/2017.

## CONTENT VALIDITY CERTIFICATE

**This is to certify that the tool**

**SECTION A : demographic data**

**SECTION B : Standardized pain assessment scale**

Prepared for data collection by Ms.T.Sophia., II year M.Sc(Nursing) student, college of Nursing, Madurai Medical college, Madurai, who has undertaken the study field on thesis entitled **" A study to evaluate the Effectiveness of distraction tactics on pain among children receving anti rabies vaccine injection at outpatient department, GRH Madurai."** has been validated by me.

SIGNATURE OF THE EXPERT 02/03/07

PRINCIPAL
MADURAI APOLLO COLLEGE OF NURSING
ELIYARPATHI VILLAGE
MADURAI SOUTH TALUK, MADURAI-22.

NAME : Dr. A. HELEN M PERDITA.

DESIGNATION : Principal

ADDRESS : Madurai Apollo College of Nursing.

DATE : 02/03/07

**CONTENT VALIDITY CERTIFICATE**

**This is to certify that the tool**

**SECTION A : demographic data**

**SECTION B : Standardized pain assessment scale**

Prepared for data collection by Ms.T.Sophia., II year M.Sc(Nursing) student, college of Nursing, Madurai Medical college, Madurai, who has undertaken the study field on thesis entitled **" A study to evaluate the Effectiveness of distraction tactics on pain among children receving anti rabies vaccine injection at outpatient department, GRH Madurai."** has been validated by me.

N. Jessy

SIGNATURE OF THE EXPERT

NAME : Dr. N. JESSIE M.Sc., Ph.D. (N).,

DESIGNATION : PROFESSOR.

ADDRESS : C.S.I. JEYARAJ ANNAPACKIAM CON. MADURAI.

DATE :

## CONTENT VALIDITY CERTIFICATE

**This is to certify that the tool**

**SECTION A : demographic data**

**SECTION B : Standardized pain assessment scale**

Prepared for data collection by Ms.T.Sophia., II year M.Sc(Nursing) student, college of Nursing, Madurai Medical college, Madurai, who has undertaken the study field on thesis entitled **" A study to evaluate the Effectiveness of distraction tactics on pain among children receving anti rabies vaccine injection at outpatient department, GRH Madurai."** has been validated by me.

SIGNATURE OF THE EXPERT R. Jothi

NAME : R. Jothilakshmi

DESIGNATION : Reader

ADDRESS : SHNC, madurai

DATE : 16/3/17

R. JOTHI LAKSHMI, M.Sc.,(N)Ph.D
Associate Professor
Sacred Heart Nursing College
MADURAI - 20

# APPENDIX - IV

## ஆராய்ச்சி ஒப்புதல் கடிதம்

பெயர்: தேதி:

இந்த ஆராய்ச்சியின் விவரங்களும் அதன் நோக்கங்களும் எனக்கு தெளிவாக விளக்கப்பட்டது. எனக்கு விளக்கப்பட்ட விவரங்களை நான் புரிந்து கொண்டு நான் எனது சம்மதத்தை தெரிவிக்கிறேன். இந்த ஆராய்ச்சியில் பிறரின் நிபந்தனையின்றி என் சொந்த விருப்பத்தின் பேரில் தான் பங்கு பெறுகிறேன். மற்றும் நான் இந்த ஆராய்ச்சியில் இருந்து எந்நேரமும் பின் வாங்கலாம் என்பதையும் அதனால் எந்த பாதிப்பும் ஏற்படாது என்பதையும் புரிந்து கொண்டேன். நான் இந்த ஆராய்ச்சியின் விவரங்களை கொண்டு தகவல் தாளை பெற்று கொண்டேன். நான் என்னுடைய சுய நினைவுடன் மற்றும் முழு சுதந்திரத்துடன் இந்த ஆராய்ச்சியில் என்னையும் என் குழந்தையையும் இணைத்துக்கொள்ள சம்மதிக்கிறேன்

கையொப்பம்

# APPENDIX - V

## Research Tool English

### Section A

**Part I -Socio demographic data**

1.Age of the child in yrs

a) 3-4

b) 4-5

c) 5-6

2.Sex of the child

a)Male

b)Female

3.Birth order of the child

a)First

b)Second

c)Third &above

4.Place of Residence

a)Rural

c) Urban

5.Type of Family

a)Nuclear family

b)Joint family

c)Separated

6. Mother's Education status

a)Primary Education

b)Secondary Education

c)Graduate

d) No formal education

7. Father's educational status

a)Primary Education

b)Secondary Education

c)Graduate

d) No formal education

8.Income of the family

a)Less than Rs.2000

b)Rs.2001-Rs.4000

c)Rs.4001-Rs.6000

d)Rs.6001 & above

9.Do you have pet animal at home

a)Yes

b)No

**Part-II Clinical variables**

1. Previous experience anti rabies vaccine immunization

a) Yes

b) No

2. Nature of the child

a) Hyperactivie

b) Hypo activie

c) Normal

3. Type of bite

a)dog

b)cat

c) rat

d) others

## WONG BAKER FACE RATING SCALE

**SECTION – B**


| | | | | | | |
|---|---|---|---|---|---|---|
| SCORE | No pain 0 | Mild pain 1-2 | Moderate pain 3-4 | Severe pain 5-6 | Very severe pain 7-8 | Worst pain 9-10 |
| SCORE AWARDED | | | | | | |

# APPENDIX – VI

**Research tool Tamil**

## பகுதி-I தன்னிலை விபரக்குறிப்பு

**1. குழந்தையின் வயது வருடங்களில்** ☐

**அ) 3-4**

**ஆ)4-5**

**இ)5-6**

**2.குழந்தையின் பாலினம்** ☐

**அ)ஆண்**

**ஆ)பெண்**

**3.குழந்தையின் பிறப்பு வரிசை** ☐

**அ) முதலாவது**

**ஆ)இரண்டாவது**

**இ) மூன்றாவது மற்றும் அதற்குமேல்**

4. வசிக்கும் இடம் ☐

அ) கிராமம்

இ) நகரம்

**5. குடும்ப வகை** ☐

அ. தனிக் குடும்பம்

ஆ.கூட்டுக் குடும்பம்

இ.நீட்டிக்கப்பட்ட குடும்பம்

**6. அம்மாவின் கல்வி நிலை**

**அ)** ஆரம்பக்கல்வி

ஆ) உயர்நிலைக்கல்வி

**இ)** பட்டதாரி

ஈ)படிக்காதவர்

**7.அப்பாவின் கல்வி நிலை**

**அ)** ஆரம்பக்கல்வி

ஆ) உயர்நிலைக்கல்வி

**இ)** பட்டதாரி

ஈ)படிக்காதவர்

8. **குடும்பத்தின் வருமானம்**

**அ) ரூ. 2000குறைவாக**

**ஆ) ரூ. 2001-4000**

**இ) ரூ. 4001-6000**

**ஈ) ரூ. 6000 மேல்**

**9. உங்கள் வீட்டில்செல்லப்பிராணி வைத்திருக்கிறிர்களா**

**அ) ஆம்**

**ஆ) இல்லை**

**பகுதி- II**

**1. குழந்தையின் கடந்த கால நாய்கடி தடுப்புசி அனுபவம்** ☐

**அ)ஆம்**

**ஆ) இல்லை**

**2. குழந்தையின் இயல்பு நிலை** ☐

**அ) மிகை இயக்க குணம் உடையவர்**

**ஆ) மிக குறைவான இயக்ககுணம் உடையவர்**

**இ) இயல்பான செயல்**

**3.கடி வகை** ☐

**அ)நாய் கடி**

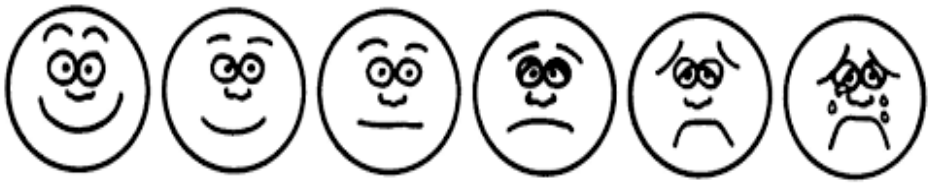
**ஆ)பூனை கடி**

**இ) எலி கடி**

**ஈ) மற்றவை**

**பிரிவு-ஆ**

**வாங் பெக்கர் ப்வேஸ் ரேட்டிங் ஸ்கேல்**

| |  | | | | | |
|---|---|---|---|---|---|---|
| **மதிப் பெண் கள்** | **வலி இல் லை** 0 | **சன வ லி**1 -2 | **மா ன வலி** 3-4 | **மை யான வலி** 5-6 | **கடுமை யான வலி** 7-8 | **மான வலி** 9-10 |
| **மதிப் பெண் வழங் கப்பட் டது** | | | | | | |

# APPENDIX – VII

**Certificate for English editing**

APPENDIX VII

CERTIFICATE OF ENGLISH EDITING

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation by T.SOPHIA, II year M.Sc (N), College of Nursing, Madurai Medical College, Madurai, who has undertaken the study field on dissertation entitled "A STUDY TO EVALUATE THE EFFECTIVENESS OF DISTRACTION TACTICS ON PAIN AMONG CHILDREN RECEIVING ANTI RABBIES VACCINE INJECTION AT OUT PATIENT DEPARTMENT, GOVT. RAJAJI HOSPITAL, MADURAI", has been edited for English language appropriateness.

SIGNATURE :

NAME : M. RAMACHANDRAN.

DESIGNATION : M.RAMACHANDRAN M.A., M.Ed., M.Phil.,

INSTITUTION : Govt. Girls.Hr. Sec.School, Sankarapuram-606 401, Villupuram-Dist

# APPENDIX – VIII

APPENDIX VIII

CERTIFICATE OF TAMIL EDITING

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation by T. SOPHIA, II year M.Sc (N), College of Nursing, Madurai Medical College, Madurai, who has undertaken the study field on dissertation entitled "A STUDY TO EVALUATE THE EFFECTIVENESS OF DISTRACTION TACTICS ON PAIN AMONG CHILDREN RECEIVING ANTI RABBIES VACCINE INJECTION AT OUT PATIENT DEPARTMENT, GOVT. RAJAJI HOSPITAL, MADURAI", has been edited for Tamil language appropriateness.

SIGNATURE : அ. ராம.

NAME : அ. இராமசாமி

DESIGNATION : அ.இராமசாமிஎம்.ஏ.,எம்.,பில்.,பி.எட்.,
முதுகலை ஆசிரியர் (தமிழ்)

INSTITUTION : அரசு மகளிர் மேனிலைப்பள்ளி.
சங்ராபுரம் - 606 401.

**Photographs**